

The Boston Medical and Surgical Journal

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New England Hospital Association.

ANNUAL MEETING WEDNESDAY, MAY 17, 1922, AT BOSTON MEDICAL LIBRARY.

The meeting was called to order at 10:30 A.M., the President, Dr. Joseph B. Howland, presided.

DR. HOWLAND: It is not my intention to open this convention with a presidential address. We will start with the informal method of meeting from the very beginning, and I should like to say that I think that if this Association is to be a success, it will be because each and all of you take part in it. We plan, at some part of each session,—at the latter part of this one, the one this afternoon, and the one tomorrow morning,—to have a question-box. It was the feeling of the trustees that if this Association was to serve the hospitals of New England to its fullest extent, it would be very largely by giving an opportunity to any of you to ask questions, to be answered by those who have had experiences which enable them to answer them. Outside of the door we have placed a question-box, for this afternoon's session. If any of you, between now and the opening of the afternoon session, think of anything you would like to have brought up at our question-box session, I wish you would drop your question in the box. This morning perhaps we shall just ask questions from the

floor, when we have finished the other business of this session.

On the programme as sent you, the paper by Dr. Hersey, scheduled for tomorrow morning, was down as "The Hospital Kitchen." Dr. Hersey is going to talk on "The Hospital Laundry," instead of the kitchen. It was my mistake in having it so placed in the programme. Also, I want to say, referring to the list of hospitals open for inspection tomorrow, that these visits will be quite informal. They are not going to entertain you, but they are going to try to show you what you may want to see. The list is not complete; the New England Hospital for Women has called our attention to the fact that it is not on our list; they want us to say that they will be glad to have visitors. The Eye and Ear Infirmary will also welcome you, though that is not on our list.

I want to call your attention, also, to the fact that at the small table outside of the door, there is a place for registration. We hope that those of you who have not already registered, will register your name and your hospital.

The order of business calls for the reading of the minutes of the previous convention. As this is the first convention, there is nothing to be said on that. The next item of business is "Announcements." The Secretary has no announcements other than those on the programme.

I will ask for the report of the Secretary.
(Report read by Dr. Faxon).

Report of the Treasurer was called for and read.

Dr. HOWLAND: Mr. Lee, may I ask that you will get the treasurer's report, and report for the auditing committee later.

The chairman of the membership committee has not arrived; we will have his report later. The chairman of the legislative committee is not present; nor is the chairman of the committee on constitution and rules; so we will proceed with the first paper.

I think we all realize that advances in Electrical Science have been very rapid, and for this reason it seemed very desirable to have a paper on the subject of Modern Hospital Illumination. In asking the speaker of the morning to come, I feel that we are very greatly indebted to him; first, because he is not a member of the Association, and, secondly, because he was due to attend the Convention of Lighting Associations at Atlantic City, which, of course, we all know is a magnet drawing us all very powerfully. He has foregone that convention to come to our convention, and I am sure we are very much indebted to him.—Mr. Alfred J. Hixon, the President of the Hixon Electric Company.

MODERN HOSPITAL ILLUMINATION.

BY ALFRED J. HIXON, PRESIDENT OF THE HIXON ELECTRIC COMPANY.

In addressing you upon the subject of Modern Hospital Illumination, I should wish to correct a possible impression that the laws of illumination were any different in hospitals, than elsewhere. They are not. There are certain specific conditions found in hospitals, which have to be met by special applications, and in so far as these are found exclusively in hospitals they might possibly be called Hospital Illumination. However, Hospital Illumination is no different from other artificial illumination and the best results will be accomplished in every case by a thorough understanding and practical application of the more ordinary conditions and limitations governing lighting. For that reason, I wish first to direct your attention to some of these conditions and will then suggest a few methods of meeting the problems as found in the hospital more specifically.

It is not my intention or desire to attempt to present a learned or technical treatise upon the subject, but merely to point out to you a few simple truths, which may assist you in improving your present lighting systems, and which, if kept in mind, will certainly prevent you from committing many of the common errors with regard to lighting.

The first fact that I want to bring to your attention is that illumination is an exact science. My reason for making this statement is that it is many times looked upon as a "hit or miss" matter, and invariably to the detriment of the results.

The natural laws which apply to illumination, if not fairly thoroughly understood and not properly applied, will defeat any attempt at good lighting. To illustrate, the proper illuminant and proper fixture improperly placed with relation to the area to be illuminated are just as ineffective in the result as would be the installing of an improper illuminant or improper fixture and, by the same token, the improper use of reflectors or glass-ware may defeat an otherwise wholly effective scheme of lighting. It is therefore desirable that in the arrangement of the artificial illumination, first, proper equipment be adopted and, second, that it be properly installed, the object of the comprehensive plan being, maximum amount of useful illumination for the minimum expense, proper consideration to upkeep and operation being given.

The importance of systematic wiring is especially to be noted. By systematic wiring I mean consideration of the proper installation subdivided with a view of maintaining good regulation and sufficient flexibility to enable changes to be made from time to time, without impairing either the efficiency or the safety of the system. Curtailment of outlets and curtailment of switches for the proper control of lights is invariably expensive in the long run and many times defeats the illuminating system, either from a distribution standpoint or by excessive loss caused from overloading. I merely mention this question of wiring in passing so that it may not be overlooked in your minds. It is a matter which should only be considered by an engineer, since it is a highly technical problem, not possible of solution by laymen.

It should be emphasized that low first cost does not necessarily imply efficiency; the question of efficiency hinging upon the combination of first cost plus operating expense and upkeep always measured in terms of useful lighting.

The second fact which I wish to bring to your attention is one which I am constrained to believe is a source of more trouble in existing systems than any other one, namely, the disposition on most people's part to perpetuate an existing system, though the same is admittedly in error, the practice dating back to the advent of the incandescent lamp, of substituting one form of illumination for another without due consideration for the improved characteristics of the new illuminant. In the earlier foras of the incandescent lamp this was not so pronounced, but since the advent of the tungsten lamp with its greatly improved efficiency this has become a very serious error. Putting modern lamps in antiquated lighting fixtures and expecting good modern lighting from them, is a fallacy too evident to need more than passing comment. The practice of installing larger lamps in fixtures than the fixtures are designed for, with a view of obtaining greater intensity and better illumination, is equally fallacious.

The third fact that I wish to direct your at-

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tion, is, the great improvement made in the type and efficiency of the modern incandescence lamp, which has made possible the entire revision of our ideas and practices with regard to artificial illumination. The early incandescence lamp had an efficiency, and I merely give these figures for comparative purposes, of approximately 4 watts per candle power. The modern so-called Type "C" incandescence lamp has an efficiency of approximately .75 of a watt per candle power, which is something over 5 times as efficient as the original lamp. This, combined with the constantly lowering cost of electricity, especially where bought at wholesale rates, brings the quantity of illumination available at reasonable expense to a point where we have abandoned the idea of specifically lighting certain objects or comparatively small areas, turning to general illumination meaning, filling the area lighted full of light, so that almost any ordinary process may be carried on anywhere in the area without particular regard to the location of the illuminant. This radical change in the approach to artificial lighting has necessitated radical revisions in the ways of measuring illumination and has caused the abandonment of the old candle power ratings and the adoption of the rating of all lamps on the basis of the current consumed and measuring the efficiency of all artificial illumination on the basis of its intensity or, in other words, in foot candles per given area.

The next important fact that I wish to bring to your attention in connection with artificial illumination, is that all illumination is measured by comparison, and I wish to warn you at once against the use of the human eye in making this comparison. The human eye is not a good photometer or foot-candle meter. The reason it is not a good measurer of comparative values in illumination is due to its high degree of what is known as accommodation, and I might point out to you that a large majority of all our so-called eye-strain produced by illumination is produced by this same property of accommodation on the part of the eye and this is due to one of the most common faults in illumination, namely, too great a contrast or too great a degree of difference in light intensity occurring within a comparatively small area or what might be more properly termed, the working area of the eye.

This may be caused either by too brilliant an illuminant, improperly placed, or by the use of the wrong type of equipment such as shades and reflectors. We should strive to avoid marked contrasts in illumination and to obtain the most perfect distribution possible.

An eminent authority on illumination, when recently asked what his definition was of a perfect lighting fixture, stated "that it was a fixture which furnished proper illumination without being unduly conspicuous," or, in other words, furnished the illumination without so great a degree of intrinsic brilliancy as to make itself

objectionable. This, I believe, is the object sought by most of our modern lighting engineers, and most of the modern illuminating units that are worthy of consideration embody these features in a more or less successful manner; it therefore remains for the engineer to give due consideration to the nature of the area to be illuminated and the use to which this area is to be put, to select and install the proper lighting.

I wish to impress upon you that all artificial illumination should be measured in foot candles of useful light at the working plane and not in fixture ratings, and that all fixtures and equipment should be purchased rather with the thought of economy of operation than economy of first cost, since cheap glass-ware may defeat a lighting system to such an extent that the original cost of the fixtures may be consumed many times in the coal pile and thereby prove very expensive.

For the purpose of measuring foot candles of useful light in any given area, which, really in the last analysis, is the measuring of the value received for the money spent, I wish to call your attention to this little instrument known as the Foot Candle Meter, which is one of our more modern products and which I commend to you for its simplicity, its accuracy and its freedom from any technicalities. It can be used by anyone without the slightest technical knowledge and with the most effective results. Every institution which considers its running expense and wishes to enhance its lighting efficiency should own one of these little instruments, and the executives of the institution should satisfy themselves by its use, that they are getting what is best for them in the way of artificial illumination. I venture to say that the general and intelligent use of this instrument, combined with the little expert advice as to improving methods and equipment, will effect a marked saving in 90% of the hospitals of this country.

To sum up the foregoing rather brief résumé of what might be called the cardinal points of artificial illumination:—

1. Lighting is an exact science.
2. Efficient lighting requires coördination of equipment, lamps, fixtures, and wiring.
3. Modern lighting is done largely by general illumination.
4. The two prime factors to be considered in lighting any given area are, intrinsic brilliancy of the illuminant and equal distribution in the area illuminated.
5. Measure artificial illumination in terms of useful light rather than in fixture or lamp ratings.

In the illumination of the sick-room, whether it be the open ward or the private room, up to a certain hour in the evening when the patients are supposed to go to sleep, we should closely simulate the home under normal conditions. This should be a cheerful illumination which requires a brilliancy of from 3 to 5 foot candles.

It is essential that this illumination should be by means of a type of illuminant in which the intrinsic brilliancy, or contrast, should be very low owing to the fact that the patient is in a reclining position and therefore forced to face the general direction of illumination. This fact does not justify the placing of the illumination in abnormal positions such as from the floor, but merely means that the illumination must be sufficiently distributed to avoid high brilliancy or marked contrast.

After the hour in the evening when the principal illumination is extinguished and the patients are supposed to go to sleep, the rooms must be provided with sufficient lighting to enable the nurse to make her rounds without inconvenience or undue disturbance. This illumination must not be sufficient to wake the sleeping patients and should not exceed $\frac{1}{2}$ of 1 foot candle. Since unusual lights have a marked effect in waking the patients, it is found desirable to have this second source of illumination in the same location as the principal illumination for the room, this also giving the desired distribution.

We have worked out a fixture for this purpose to which I wish to direct your attention. We do not claim that this is perfect nor that it is the only solution, but we feel that it is one reasonable solution of this very vital problem. I am quite certain that any solutions which depart from the elemental essentials of good lighting to accomplish these results are wrong.

Bed-side lamps of normal brilliancy, no matter how shaded or hooded, do not serve the required purpose because of two very prominent reasons: One, they will not sufficiently illuminate the room to give the nurse convenient freedom of action; two, they produce the contrast that should be avoided. Lights in the floor and other unusual places are not successful as long as they do not provide two intensities of illumination.

A special application of great importance in a hospital is the illumination of the operating-room. I would call to your attention the large majority of forms of illumination commonly used which center the light upon the object. This is wrong. The problem in the operating-room is the same problem it is elsewhere; namely, filling the area full of useful light, so uniformly distributed that the eye will not be called upon to accommodate unduly and the hand and the instrument will not cast prohibitive shadows. This can be accomplished merely by installing a suitable type and arrangement of ceiling fixtures, taking into consideration the necessity for a much higher degree of intensity and better distribution of illumination than is required elsewhere, from 25 to 50 foot candles over the entire working area.

There are other minor special applications for hospital illumination, but the two that I have here pointed out are, I find, the principal deviations which might be directly termed Hospital Illumination. In the remainder of the hospital,

the same rules for good lighting should be applied as are applied in an office building, bank, factory or any other place where the people are doing more or less confining work and should be applied to the types of utility that are found in the various parts of the institution. The question as to proper amount or degree of illumination is, to some extent, fairly well established, such as where clerical work is being done the light on the lighting plane should have an intensity of from 5 to 8 foot candles. In dining-rooms, kitchens and other places where the work is less confining this illumination can be cut down to 4 or 5 foot candles.

It is well, as a general principle, to avoid so far as possible specific lighting such as reading lamps, desk lamps or lamps directly over machines or tables, general illumination being much safer and much better for the person doing the work, as well as producing much better work.

Electric lighting fixtures have been made a subject of special consideration for hospitals to such an extent that it has produced in the minds of many people the idea that there is something different about hospital lighting and hospital fixtures than about the ordinary commercial lighting and commercial fixtures. This, I believe, is an error, or at least a misconception. I realize the necessity in hospitals of having everything free from dirt and, to accomplish this end, easily cleanable. I am also of the opinion that all electric fixtures, whether in hospitals or elsewhere, should be of such rugged and substantial construction that they will be fairly free from unreasonable depreciation. In the attempt, however, to accomplish these two very practical requirements, nothing should be done which deacts or interferes with the principles of lighting. A good illustration of what I have in mind is the use of clear cover-glasses; the assumption on the part of most people is that this does not interfere with the lighting. It would probably be considerable of a shock to many of you to know that as high as 25% of the light is in some cases absorbed by this cover-glass, where the glass is of cheap or inefficient make. I could go on indefinitely pointing out similar conditions and failures of equipment due to one misconception or another, but this will serve to illustrate my point.

DISCUSSION ON MR. HIXON'S PAPER.

DR. HOWLAND: I think you will recognize that Mr. Hixon has gone to no little trouble in bringing his own office force here and setting up this installation, because he is very much interested in efficient lighting problems. I knew of his intense interest, and that is why I asked him to give us this most valuable paper.

We are very much accustomed to the remark, that it is not the first cost of an automobile, but the cost of upkeep that counts; now I think, if we have taken home the lessons Mr. Hixon has given us today, we recognize that we have a very

similar situation in our hospitals in regard to lighting. I doubt if there is one out of ten of our hospitals that doesn't come into this class, in that we are running along with very inefficient, out-of-date lighting apparatus, and are constantly spending money to bring it up to standard. We know, if we have to spend money on new lamps or fixtures, that it is going to cost something, but we do not recognize it clearly when it comes in the coal bill.

Mr. Hixon calls attention to the modern type of lamp; the so-called nitrogen lamp is five times as efficient as the old carbon lamp, and three times as efficient as the lamps around the room, which most of us use to a very considerable extent.

MR. STEVENS: I am extremely interested in Mr. Hixon's talk. It is very enlightening; I had almost said very illuminating. It has given me many good suggestions. There are one or two things which in my own practice I have brought out in lighting. We always try to get our inspiration wherever we can, and in going through one of the larger hospitals in Europe, I noticed that they had the double lighting system Mr. Hixon speaks of, the intense lighting for illumination of the room, and the night light; and the night light I noticed was made less actinic by being dipped in blue, giving a less trying light, a bluish light. I have since used that a number of times, with very good effect. Dipping the bulbs in amber gives even a softer light. This is just a suggestion that I have worked out.

Another thing that occurred to me, which Mr. Hixon did not mention, is the matter of night lighting of the corridors. I have met with considerable reaction from the fact that corridor lights,—which we must have,—if the doors of the patients' rooms happen to be open, or there are transoms, are rather trying to the patients' eyes; and to overcome that I have placed lights low down in the wall. These lights give sufficient illumination for going about the corridors, and do not interfere with the patients' comfort. The same thing applies in the operating-rooms. While we must have the intense light for certain times, there are other times, such as when the nurses are cleaning up the room, that the intense light is not needed; and side lights of a nature similar to those placed in the corridors have been placed in operating-rooms to advantage.

MR. HIXON: Dipping the lamps in blue does not reduce their actinism; it increases it, because the blue filters out red rays. A blue glass lamp, easily obtainable anywhere, is made for the purpose of taking out the red rays. A blue light is much easier on the eyes than a red light or a white light. The non-actinic ray is the ray which has the weakening and disturbing effect. Amber light is the proper light. On any of these

fixtures here, you find an amber light. There are various possibilities; but the only really satisfactory way we have ever found of accomplishing this purpose is by having two different intensities. On the question of lighting corridors, we simply have taken this position,—if the corridor is lighted by clear glass in the doors of rooms, or by transoms, then the same thing applies to the corridor that applies to the room, and you use the same type of fixtures, or something akin to it. The question of having lights in corridors specially placed in the walls, is about the same as using lights in floors, and I should say that the best statement to illustrate the fallacy of those things,—though I say it reservedly,—is to note the fact that natural illumination comes, ordinarily, from above, being reflected by the ceiling. You know that this room is not well-lighted, partly because the fixtures here are not right, but mainly because the nature of the ceiling is such that it cannot be well lighted. The only kind of fixture that would light this room well would be a fixture that had a reflector over it. Normal light, natural illumination, comes from above; it comes in the windows, and is reflected from above. When you put lights below, you produce sharp shadows, no matter what intensity it is, which gives a marked contrast between the intensity of light at one point and at another point, and these contrasts are what give most of the trouble. You want even distribution; I think of the many things necessary to produce good light, distribution is the main thing. Natural illumination is the best illustration of distribution, and the reason is because the sun is so far away. If it were possible in artificial lighting to place the illuminant at great distance from the surface to be illuminated, then we should get distribution. While I do not say there is no way of working out the side light proposition, I am of the opinion that the tendency should be away from these things, rather than towards them. The same thing applies in regard to the operating-room. There should be lights of greater and lights of less intensity. What I have tried to fix in your mind is that the illumination should be distributed, and sharp contrasts avoided. You should have absolutely uniform illumination over the entire working area; not only on the patient who is being operated on, but on everything in the room.

At the present time, we can produce lamps known as daylight lamps, and we are proposing to install in one or two hospitals an experimental system, in the operating-rooms, of the reproduction of daylight intensities; that is, the reproduction of the intensity of daylight, of the distribution of daylight, and of the color of daylight. You have all, probably, experienced the difference between artificial daylight and daylight. Under artificial daylight, the colors seem to be sometimes brown and sometimes blue; they change like a kaleidoscope. Light can be pro-

duced which will supersede artificial light, and give the same intensity and the same quality as daylight, and that is what we are attempting to do.

Dr. Carrell of the Rockefeller Institute has installed a system of daylight lamps. He had at first a combination of skylights and these lamps; now he keeps the skylights closed and works entirely by the lamps. He says illumination by the lamps is so much steadier, and so much more uniform that he prefers it to daylight; because when he uses daylight, he gets in the middle of an operation, when perhaps a cloud goes over the sun, and the intensity of the light changes. So he prefers artificial light. When we can reproduce daylight in color and with sufficient intensity, and sufficient distribution, we shall find artificial light superseding daylight for these purposes.

An explanation of the color scheme of Dr. Carrell was asked for.

MR. HIXON: Dr. Carrell is very much opposed to all whites. His room is done in dark lead color; the ceiling is not so dark as the walls; the floor is quite dark. In other words, the room is such that the walls do not reflect. That is one of the things that cause much trouble. Light goes to the wall and back to the object, and you get different angles, which cause reflections and which obstruct vision. Dr. Carrell does away with that by having everything dark color. His clothes are all dark colored. None of his nurses or attendants dresses in white; so that there is no reflection whatever. It is all absorption, rather than reflection. His lighting scheme consists of groups of lamps within four or five feet of each other, so arranged that the light comes from so many sources that there are no shadows. The room is almost entirely free from shadows. There are no cross lights, because there is no reflection. Doing away with the skylight, he has uniformity of illumination at all times.

DR. BAKER of Fitchburg: What do you consider the best color for the walls of an operating-room?

MR. HIXON: I hesitate to make an absolute statement on that matter. I don't believe any walls in any hospital should ever be painted white or any of the very light tints. That has been done simply to conserve a meagre supply of illumination, and it has produced glare and many trying effects. In an operating-room, I don't know whether I would go as far as Dr. Carrell does, to say that the room should be always like a dungeon. I think it should be a great way from light colors,—surely not white. For the conservation of light, white is the best, a non-absorbing white.

DR. BAKER: As a lighting engineer, what color would you put on the walls of an operating-room?

MR. HIXON: Light gray,—or perhaps not a light gray, but a quite pronounced gray; with the ceiling about the same, and the floor somewhat darker.

DR. BAKER: What size candle meter should the ordinary living room register in order to be well lighted?

MR. HIXON: A room to be cheerfully lighted should have from 3 to 5-foot candles, depending upon the surroundings, such as the color of the woodwork, the painting, hangings, the amount of them, and so on. A very dark room should have as much as five; a lighter one, with lesser hangings, may be equally well illuminated with 3-foot candles. For a well-lighted room 3 to 5-foot candles are required. If it is much below that, you get eye-strain from the attempt to see; there is an excessive accommodation; or if it is much above that, there will be eye-strain, because of the relation between the minimum and the maximum light and from the nature of the light.

Q. In a single bedroom, private room, where should the electric lighting fixture be placed?

MR. HIXON: The fixture should always be placed in the ceiling. It is impossible to get proper distribution from a fixture placed in the side wall.

DR. PETERS, Rhode Island Hospital: What is the best way to illuminate an operating-room—from a special hanging lantern and reflector, or lights around the edge of the ceiling, or from lights over glass ceilings, or from several openings in the ceiling?

MR. HIXON: That depends somewhat upon the nature of the room, and also upon the height of the ceiling. Taking a room of average size, with a full-size operating table, and the usual number of surrounding tables, and the usual number of people working, I should say that the best method of illumination would be six or eight fixtures hanging from the ceiling; depending somewhat on the shape of the room. Reflectors should not be used. They project light, and any attempt to project light kills distribution, and whatever kills distribution produces sharp shadows, which defeats illumination. You want to control the light and distribute it, so that the light in one place is as great as in another. The nature of the light should be such that it will work the same as daylight, and produce the same color reaction as daylight, for the reason that the eye normally works under daylight more than under artificial light. If you can simulate daylight, you get the most efficient condition, and that is what you should do. You do not want any reflectors, for anything that tends to project light is bad. You want something that distributes it, and just simply directs it, and conserves it, to the best advantage.

Dr. FAXON, Massachusetts General: The problem of lighting desks in an office room, either in the superintendent's office, or the clerks' office, comes up frequently,—should that be done from an overhead fixture, or from a desk lamp?

Mr. HIXON: In answering that question, I seem to have to qualify my other statements. If you have a room that is strictly an office room, a room where there are two or three persons working,—say a room 15 feet square with a 10-foot ceiling,—the most efficient and the best way is to fill the room full of light by illumination from the ceiling. In other words, simulate, as well as possible, daylight conditions. But I know a number of cases where a desk is placed in a large entrance rotunda, and where the total illumination is not sufficient. Under those conditions, the best thing to do is to have a desk light of special illumination. But as far as possible, avoid desk lights, or the lighting of specific areas. In insurance offices a large number of clerks are usually employed; sometimes hundreds work in one room. A few years ago, it was a quite common practice to have a light on every desk, and anyone who didn't have one felt slighted. When general illumination from the ceiling was put in, they were very reluctant to give up the desk lights, the individual illumination. It took quite a while to realize that those desk lights were very disturbing to the eye-sight. Most eye-strain comes from lack of uniformity, from poor distribution. If you get good distribution over the working area, you are saved from eye-strain. There are specific cases where you might want a desk fixture; but in the usual case, general illumination makes the room more cheerful, produces better work, conserves the health and eye-sight of the person doing the work.

Q. I have heard it stated that one insurance company that installed the system you speak of, later on found they were having difficulty with eye-strain; do you know about it?

Mr. HIXON: I will say this, that this whole matter of general illumination is only just in its beginning. Some of the earlier attempts were defeated, some because the illumination was not sufficient,—and just the condition you speak of took place. Other cases were defeated because the wrong fixture was used; in other cases the fixture was right, but the distribution was wrong—wrong arrangements of fixtures. What I would say is, that it is perfectly possible to give a room general illumination in such a way that you will practically do away with eye-strain, and increase production. I do not mean that everything that looks like general illumination immediately accomplishes these things.

(At the request of Dr. Hersey, New Haven Hospital, Mr. Hixon demonstrated the difference between carbon light and tungsten light).

Dr. FULLER, Fall River Municipal Hospital: What is the relation between the size of a room and the distance of the fixture from the ceiling?

Mr. HIXON: That depends upon what is known as the working plane. You have first to establish where the working plane is located in the room and what amount of illumination is desired on this plane. The location of the illuminant then depends upon the intensity or size of the lamp. This is restricted only by the possibly intrinsic brilliancy which can be used without producing eye-strain.

Having determined the size of the lamp and the intensity required at the working plane, the location of the lamp depends upon the height of the ceiling, which limits the height of the lamp above the working plane.

When these factors are all taken into consideration the spacings of the fixtures can be worked out exactly, so as to give very nearly uniform illumination. The neglect of any one of these factors in working out this illumination problem will certainly defeat the result, and this is the most common reason for bad lighting and unsatisfactory results.

Dr. HOWLAND: I just want to say that Mr. Hixon has been given an opportunity to put in what he thinks is the right operating-room lighting fixture in a hospital not yet completed, and I hope it will be something that you will be interested to come and see later. I think we have all made mistakes in corridor lights. We have put in glass transoms, and then had to cover the transoms, because the lights disturbed the patients at night, and perhaps we have been tempted to do what Mr. Stevens spoke of,—put bracket lights down below the transoms. One very simple thing to consider is whether you have transoms for light, or for ventilation. If for ventilation, it is very easy to put in something opaque. It is also possible, without going into the matter very deeply, to consider the location of night lamps, and not have them placed opposite the doors of the rooms.

If there are no other questions, I am sure I am speaking for all of us when I say that we appreciate very greatly Mr. Hixon's coming here and giving us so much time and telling us so much.

I did not know just how to plan the programme; I did not know just how much time would be taken with the reports and discussions. So far as the schedule of papers is concerned, we are through for the morning, and I hope now we may have some questions from the floor.

AMBULANCE SERVICE.

Dr. HERSEY: I should like to inquire if any of the hospitals are able to get on without ambulance service by employment of outside agencies to carry patients back and forth.

Dr. BAKER, Fitchburg: We do that. One of the garages maintains a public ambulance, and

they bring in all of our cases. We pay them \$3 for every ward case, and \$5 for every private case. They never send out an ambulance to bring a patient to the hospital until an order is given from the hospital. We get along quite smoothly that way.

Q. How much does it cost a year? *A.* About \$100 to \$125 a month. We average about 100 patients a day. They handle emergency cases, and their service is very satisfactory.

Q. Do you call for private cases? *A.* We do call for private cases and pay the garage.

MR. PORTER, Malden: Why should a hospital provide an ambulance, or when? At what stage in a hospital's development should it provide an ambulance?

DR. DREW, Worcester City Hospital: The Police Department of Worcester provides ambulance service for all the hospitals of Worcester. I don't know that any hospital in Worcester maintains an ambulance service. There are private ambulances, and I think the Police Department charges patients who are admitted to the private ward service, and, possibly, they make a charge for some other patients; but the City Hospital does not collect any fee, nor pay the ambulance people for any work they do. If a ward patient wants to go home, the Police Department takes him home when we request it. Usually they wait until the ambulance has to bring a patient to the hospital, and probably then another patient will want to go home, and is not quite able to go by trolley, and perhaps not able to pay a taxicab.

DR. HOWLAND: Do patients not object to having the police ambulance come to their doors?

DR. DREW: They are so used to seeing the ambulance take patients, they don't object.

MISS METCALF, Lewiston, Maine: In Lewiston the undertakers maintain an ambulance, which is at the service of the public. The hospital I represent serves a community within a radius of 50 miles. It is a very common occurrence for a doctor to ask to have the ambulance at the train to meet a patient. We call the undertaker and engage the ambulance, and the patient pays the bills, which is usually \$3. They also go long distances into the country to get patients, and to take them home. The undertakers have to keep men around for their work, and these men are very expert in moving patients. They are frequently called in accident cases. The charge is \$3 for going to the station; for trips out of town, it varies. With the automobile they furnish a very comfortable bed, which can be hired to send the patient on the train. Many patients come on the Grand Trunk Railroad, from as far as Portland. They furnish a comfortable cot, with a little mattress on it.

MAN. I think, Mr. Chairman, that if people object to having the police ambulance call at their doors, they would object more to having the undertaker call.

MISS METCALF: They use a special ambulance; not the undertaker's wagon.

WOMAN. We use the undertaker's wagon, but it has a red cross conspicuously placed on it.

MISS LEECH, Somerville Hospital: Our Police Court does all of our ambulance work, entirely without charge either to the patient or the hospital. They not only bring and take away the house cases, but patients for x-rays.

DR. FULLER, Fall River Hospital: We have a free ambulance which takes all patients, for x-rays, orthopedies, and so on. The only restriction is that the ambulance does not go outside of city limits.

Q. On what basis do you charge in Lewiston, Miss Metcalf?

MISS METCALF: I don't know how much it is for long trips. It makes some difference if it is in the night, and it also depends on the time of year, the condition of the roads. The average city cost is about \$3.

DR. HERSEY: We maintain our own ambulance, and charge one dollar a mile in one direction.

DR. HOWLAND: The Peter Bent Brigham charges \$1.50 a mile.

DR. J. M. PETERS, Rhode Island Hospital, Providence: Within city limits, we charge \$2 a trip, no matter what the distance, if they are able to pay. Outside the city limits, the minimum charge is \$5, a dollar a mile after they leave the city; that is, if it's a mile out from the city, the charge is \$6.

DR. CANN, Union Hospital, Fall River: We maintain a private ambulance service, and charge \$1.50 within city limits to private and ward patients, and \$1 a mile outside of the city limits, in one direction; we do not charge for the return trip.

REFRIGERATING SYSTEMS.

DR. RICHARDSON, City Hospital, Providence: I should like to ask whether other hospitals have difficulty in maintaining different temperatures in their refrigerating boxes, one box being, say 32°, and another 40°.

DR. FAXON, Massachusetts General: I don't think this will help very much; but a year or two years ago, we installed a new refrigerating system, and following the installation we had a lot of trouble in maintaining temperatures, not only in different boxes, but in the same box. The

trouble was finally traced, and, after many trials, was found to rest mainly with the machinery itself. The installation was not well done. Since those defects have been remedied, we have had no difficulty. So it would seem that the problem came down to a proper engineering plant, and to installation properly placed. Those two factors being settled, it ought to work all right. Our trouble was in the mechanical operation of the plant; that being remedied, it worked all right.

DR. HOWLAND: We found difficulty in the cooling box due to the manner in which the piping was placed. Air-traps had to be put on at the highest part. Otherwise, it didn't circulate well.

DR. RICHARDSON: We had a plant put in just recently. While it works pretty well, it doesn't work exactly as I hoped it would. It was put in by the automatic people, and in their system the automatic arrangements work from a key-box, which is farthest from the machine, and when that box gets to a certain temperature, it starts the machinery. The other boxes must be so bypassed as to coincide with that key-box; that is, if the key-box goes below a certain temperature, it should be maintained by the other boxes through the by-pass. I think we have more or less difficulty.

DR. FAXON: Ours works by the coöperation of the store man, who is in charge of the ice-box, and the engineer. That is the automatic method we pursue. I think it is more trustworthy than yours, Dr. Richardson.

NURSES.

DR. SMITH, Maine General Hospital: At a meeting of the Hospital Round Table last January, I proposed a question which my friend Dr. Peters somewhat flippantly called a conundrum; but I am going to introduce it again today, hoping that with the large experience of those here, I may get some light. The question is this: Can anyone offer a practical solution of the difficulty many of us are having in keeping up our supply of probationer-nurses? If I may be allowed to say just a word,—doubtless many of you will agree with me that for the past few years there has been increasing difficulty in making good our losses by graduation, by an adequate supply of probationers. One reason, I am quite sure, in my own State, is that we have a large number of very small hospitals, running from fifteen to twenty-five beds, and every one of those small hospitals seems to think they must maintain a training school, and a great many young women are directed to them who would otherwise go to the larger general hospitals. Another phase of the question impresses me somewhat. There is not only an increasing difficulty for the hospital training schools to keep up the supply of nurses, but the

supply of those who ought to be utilized for the public is being diminished by the fact that public health work, various philanthropic services, schools, insurance companies, and others are taking graduate nurses out of the field of private work and employing them in semi-public and official positions. It seems to me that is one phase of the question that has not hitherto asserted itself quite as much as at present. We are feeling it in Portland, and probably other parts of Maine, very keenly.

MISS RIDDLE, Newton Hospital: I believe that the training school should, first of all, have something very definite to offer its class of probationers; then, having secured them, the training school should make good, and, having made good from time to time, there will be very little difficulty in securing other probationers. There are a good many young women, more than at any other time in our history, taking up nursing today; but there are so many hospitals, large and small, with training schools, that it seems as if we were really having a great scarcity. The hospitals are feeling the scarcity, not because the number of young women entering schools has decreased, but because the demand has increased. I believe that if the community in which the nurse works gives her a place in the community, and the hospital itself does its part toward the nurse, that will be good advertising, and will secure probationers for the school.

HOSPITAL CHARGES.

MISS ETHEL DOHERTY, Holyoke: I should like to ask what hospitals are doing generally in regard to the charge per week for one week's nursing. Some of the hospitals charge exactly one week; that is, if the patient goes in on Monday at 12 o'clock and goes out on the following Monday, that is one week. We have been in the habit of charging for eight days; having our day end at midnight, and charging a whole day for every day or part of a day; so that a patient coming in on Monday at noon, and going out Monday at noon would be charged for eight days. We are trying to revise that system.

MR. BRAY, Newton Hospital: We had that same problem to meet some little time ago. We charged both for the day the patient came in and the day he went out. Then, later, we made a charge of a double price for the first day; on a private room at the rate of \$5 a day, the charge was \$10 for the first day and \$5 for each succeeding day. In that way we accomplished the same thing as in charging for the first day and the last day full days. But we had trouble with that; the doctors found it difficult to explain why there was a double charge for the first day. And so, for the past two years, we have adopted the plan of charging for a single day, but making the first day cover from the hour of admission to six o'clock on the following day, and

all other days to begin at six o'clock; so that if a patient comes in before twelve o'clock at night, his first day would end at six o'clock; if he comes in after twelve, his first day would end at six o'clock the following day. That plan has given better satisfaction than any other we have tried.

MR. PORTER: The trouble is occasioned by making weekly rates. I don't believe anybody goes to a hospital to stay a week; they go to stay as short a time as they can. It is different from going to a boarding house; if you have a job, you want to hold it more than a week; if you are going to a hospital, you want to make the time as short as possible. In Malden we have no weekly rate; we found it was too much trouble explaining to people what a week was. It is more convenient to have daily rates, and make the charges on that basis.

DR. BROWN, Mary Fletcher Hospital, Burlington, Vermont: We charge for the day of admission and the day of discharge as one day, regardless of the length of time they stay.

MISS BOOKER, Corey Hill Hospital: We make no charge for the day the patient enters, but we do charge for the day of discharge, regardless of the hour.

DR. HOWLAND: The question-box is placed just outside the door, and I hope we shall have a great many questions.

After the papers of this afternoon, we plan to have questions placed in the box answered, and I hope the questions will be there.

Meeting adjourned at 12:30 p. m.

(To be continued.)

Original Articles.

OBSTETRIC EMERGENCIES.

By R. S. TITUS, M.D., BOSTON.

GENERAL acceptance by the medical profession and by the laity of the great value of careful medical attention of the pregnant patient has greatly reduced both infant and maternal mortality and morbidity. This acceptance has come largely through intelligent propaganda sent out by the Child Bureau, United States Department of Labor, the American Child Hygiene Association, and state medical societies. It has aroused the interest of everyone in the condition of the pregnant woman, her limitless economic and social value.

State legislatures and the national government have busied themselves about legislation, relieving the financial burden of child-bearing, and providing adequate medical care before and at confinement. Much of such legislation is opposed as too socialistic, as derogatory to the

medical profession, and in general as depriving individuals of their free choice; but in spite of whatever may be said for or against it, all such activity shows how the wind is blowing. It means that people are now thinking about something which ten to twenty years ago was not even thought of. It means that child-bearing is a recognized problem of national importance, a condition in the past which has shown results to be ashamed of, and more than anything else it means that there is a remedy worth applying.

Intelligent prenatal care begins with the beginning of pregnancy, and, carried forward until its termination, has achieved definite results. It has ruled out as unfit to bear children, the chronic nephritides, certain tuberculars, the severe cardiacs, profound diabetics, and saved such patients from an obstetric death and for a life not further impaired. It has designated as hospital patients, not to be left in their homes in isolated communities, those whose bony pelvis make Caesarean a necessity, thus reducing to a point almost negligible the brutal craniotomies of twenty years ago. It has reduced the incidence of early miscarriage by thoughtful hygienic advice, and careful reposition of retroposed uteri. By routine blood analysis, it has singled out the syphilitics, and has made intensive anti-syphilitic treatment possible, with a distinct lowering of infant mortality from the specific etiological standpoint. It has found out the healthy pregnant patient and has kept her healthy. It has recognized early toxemias with increased blood pressure and albumin, and has prevented the occurrence of actual eclampsia, by intensive treatment and premature delivery. In this latter type of case, the occurrence of actual eclampsia has been reduced almost to the point of non-existence. It alone is worthy of all the kind things said on every hand of prenatal care.

All this, prenatal care accomplishes directly, but there are conditions which can neither be foretold nor prevented, serious accidents which will occur, and which adequate prenatal care cannot foresee or avert, and which must be met directly and intelligently to carry on the wonderful work of prenatal care to its ultimate successful conclusion. These represent the *true emergencies of obstetrics*.

Obstetrics deals with the pregnant woman and the unborn baby. Obstetric emergencies are acute conditions which jeopardize the life of either or both the mother and child. Of course, indirectly, any serious complication affecting the mother also affects the baby, but there are conditions which primarily affect the baby, even when the mother is in perfectly normal condition.

The first large class of cases, which are true obstetric emergencies, are bleeding cases. A perfectly well woman at or near the end of pregnancy, with no warning at all, whose urine is normal, whose blood pressure has not risen, may be seized with a profound hemorrhage.

While an initial bleeding attack is rarely severe enough to threaten life, its successor may come at any moment, and the first sign of bleeding must be looked upon as a distinct warning of impending danger. It matters little how physically perfect anyone is, loss of blood cannot be looked upon with unconcern. Post-operative hemorrhages are often fatal. Loss of blood is serious. Its replacement in time means the saving of life. Blood transfusion is one of the most valuable advances in medicine. Experience has taught that many early failures were caused by the transfusion of blood not acceptable to the recipient. Before being safely done, the blood of the donor must be found to match that of the recipient. It is a very simple matter during pregnancy to match the blood of the pregnant patient with that of her husband, or members of their families, and with a known group No. 4 individual, to be absolutely sure of an acceptable donor. Then, if the need of transfusion arises, valuable time has been saved, which must be consumed in blood matching before the actual transfusion can take place. This blood matching during pregnancy should be a routine procedure, for one never knows which patient may bleed before or after delivery, or which patient will need transfusion because of profound shock. Knowing that one has at hand an acceptable donor, if the need should arise, gives one a feeling of great comfort. Trying to get an acceptable donor at the time transfusion is necessary, is worrisome.

Bleeding cases which arise late in pregnancy need an intelligent diagnosis before intelligent treatment can be instituted. A very little blood should be looked into, its cause ascertained and its diagnosis established. The amount is of little significance. The smallest stain may be a forerunner of a severe hemorrhage, and its cause the most serious,—the centrally implanted placenta praevia. On the other hand, a very large amount may be really insignificant, when its cause has been ascertained to be merely ruptured varicose veins. It should be a routine never to be disregarded to examine vaginally every patient who bleeds at all. A diagnosis can be made in no other way. Such an examination can be done rightly only in a hospital, where all aids for true emergencies are at hand. For example: Mrs. S., eight months pregnant, reports that she has flowed a little. She should be taken into a hospital, after it has been found that her condition allows immediate removal. An acceptable donor should be got. The examination should be conducted, of course, under strict asepsis. The entire kit for bagging should be boiled. A Cesarean kit should be ready for immediate use. The patient should be under gas or ether, if a satisfactory examination cannot be made without. In other words, all should be in readiness to meet the condition that examination proves exists. Such routine will prove unnecessary very often, but the one time will come when

this habit will justify itself. The causes of bleeding in the latter months of pregnancy are:

Ruptured Varicose Veins.
Low Attached Separated Placentas.
Completely Separated Placentas, Normally Attached,—Placenta Ablatio.
Placenta Praevia:

- (a) Centrally Implanted Complete Placenta Praevia.
- (b) Complete Placenta Praevia, not Centrally Implanted.
- (c) Partial and Marginal Placenta Praevia.
- (d) Beginning Labor.

Varicose Veins: These may be on the labia or anywhere inside on the mucous membrane of the vagina. The amount of bleeding from these may be very great, but seldom serious. Diagnosis is made by inspection, or by feeling the clotted surface when the bleeding has ceased. Rarely is anything more than counterpressure necessary; occasionally ligature. Of course there is no danger to the foetus. There is no need of meddling with the uterus. Labor need not be started.

Low Attached, Partially Separated Placentas: These cases often bleed before labor starts. When seen the uterus is soft, the foetal heart distinct, there is no sign of internal bleeding. Vaginally the presenting part is felt all around the lower segment of the uterus above the cervix, and the finger, if put through the cervix, feels no placenta. Inspection reveals no varicose veins. Hence, by elimination, bleeding must come from a small area of placental separation, and this clinically is proved to be associated most frequently with the low attached placenta. Such cases should be kept quiet in bed for a few days, and if no further bleeding occurs, allowed to be up and about until labor comes. Very rarely such cases may bleed rather freely, too freely for the safety of the mother, and if she be not in labor and a primipara, abdominal delivery is probably the most conservative; but such instances are very rare. In such conditions in multiparae, where dilatation may be accomplished probably in a short time by the use of the bag, the bag alone would be sufficient. Often during labor there is some more bleeding, but usually, however, it is not enough to interfere with placental and uterine interchange, or enough to jeopardize the mother. After delivery the diagnosis is confirmed by finding the membranes torn near the placental edge, where there may be an adherent old blood-clot.

Completely Separated, Normally Situated Placentas, the Placenta Ablatio: The clinical picture of this type of case is very distinct. External bleeding is usually small in amount, the uterus is drumlike in feel, the foetal heart is gone,—because the placenta has separated,—the maternal pulse is up anywhere from 100 to 130, depending upon the amount of bleeding that has occurred. The blood pressure may be low, and in extreme cases, of course, very low. Vaginal examination reveals no placenta praevia. This

bleeding will continue until the uterine sinuses can contract. This cannot be accomplished until the uterus is emptied. A few of these cases are in such poor shape when seen that transfusion should be done as soon as, or before, any attempt is made to empty the uterus. The method of emptying the uterus depends upon whether or not the patient be in labor. If the patient be not in labor, primipara or multipara, the only conservative method is abdominal Caesarean section; if the patient be well in labor so that delivery from below may be done with no shock, version after dilatation is the method of choice. The bag is contraindicated, it may hasten dilatation, but in the meantime it in no way controls bleeding—*accouchement forcé* barbaric. Vaginal Caesarean is applicable to only those cases up to eight months, when the cervix may be brought down to a point where its sewing may be accomplished. A good number of placenta ablatio cases are seen associated with some degree of toxemia, but more specific etiology is unknown.

Placenta Praevia: The various degrees of placenta praevia are so named because of the amount of the internal os that is overlapped by the placenta. The centrally implanted complete placenta praevia is, of course, the most serious and, fortunately, very rare. It may give rise to bleeding any time after six and a half months, but often shows no sign until near term. The initial bleeding may be very slight. To go on the assumption that the cause in the particular case is of no real importance, and merely to put the patient in bed for a few days, making no attempt to diagnose the condition, is nothing short of criminal. One example will prove this.

A multipara had bled three different times in the last month of pregnancy; the attending physician had put the patient to bed each time, and had done nothing to determine the cause. The fourth attack occurred with labor and the hemorrhage was excessive. When seen she was almost pulseless, with a blood pressure of only 80, and died shortly after delivery. Had this patient been examined, and the cause of the bleeding determined at the time of the initial hemorrhage, and proper means of delivery had been instituted, there is no reason at all why she should not have lived.

Vaginal examination in these cases, if the patient be not in labor, will reveal something in the lower segment, anterior and posterior, above the cervix and between the presenting part and the finger. If the finger is put through the cervix, one feels the sponginess of the placenta and elicits more bleeding. If the patient be in labor and there be sufficient dilatation, the diagnosis is made by feeling the sponginess of the placenta inside the cervix. If the patient be not in labor and actually bleeding, immediate delivery is best. In primiparae, abdominal Caesarean section is without question the conservative operation. In multiparae not in labor, Caesarean is

safest, but the rubber bag may be used. Here, the bag, put through the placenta or outside the placenta, controls bleeding by pressing onto the uterine sinuses and hastens dilatation. Delivery, when the dilatation is accomplished, is by version. The foetal mortality of these cases delivered from below is extremely high. The Braxton-Hicks maneuver of going right through the placenta, when the cervix is not fully dilated, and grasping one leg, whereby to pull the buttocks on to the placenta, controls further bleeding, but frequently sacrifices the baby. If there be no bleeding when the diagnosis is made, and there is reason to wish to wait for the sake of prolonging pregnancy for the sake of the baby, the patient should be kept in a hospital to have Caesarean, when the bleeding recurs, or when the pregnancy has advanced to a stage where the baby has a good chance. If the patient be in labor, or well advanced in labor when seen, it is far better to use the bag to accomplish full dilatation than to manually stretch up the cervix. When the bag comes out with full dilatation, the hand is thrust through the placenta, and the baby delivered by version. It is well to bear in mind that placenta praevias of all types have a tendency to bleed after delivery. It is customary with some men to pack all placenta praevia uteri after delivery, but such a routine is not necessary. Remember the possibility! Be ready to meet the emergency when it arises, but do not forget that putting gauze into the uterus is a possible cause of sepsis.

Complete placenta praevias, not centrally implanted, but where the edge of the placenta falls way over the internal os, are diagnosed only by vaginal examination. It is oftentimes very difficult to differentiate between the centrally implanted placenta praevia and those which are complete because the internal os is overlapped. If the patient be in labor, with any dilatation at all, the differentiation can be made. If these complete praevias are diagnosed when not in labor, the safest and most conservative procedure, if immediate delivery seems best, is abdominal Caesarean section. The rubber bag is more applicable to the multiparous cervix than it is to the primiparous. If these cases are in labor when seen the bag is really all that is necessary, and the bag should be used until absolute complete dilatation has been obtained. It is far safer with three-finger dilatation in the multipara, to use the bag to accomplish complete dilatation than it is to dilate manually this soft placenta praevia cervix. Without question these cases do not stand dilatation well, even the moderate amount of dilatation that is necessary in multiparae showing three-fingers dilatation to begin with. They stand no shock at all, and one should be ready to transfuse any case of this sort after delivery. If the bag is used, it may be put outside or inside the ovum and has the twofold purpose of controlling bleeding and hastening dilatation. After the delivery of the bag, ver-

sion is the operation of choice. Braxton-Hicks maneuver is advocated in those cases showing some dilatation, but the bag gives far better results.

Partial and marginal praevias are diagnosed, of course, by vaginal examination. The partial ones are best treated universally by the bag, with version after the bag has been expelled. The marginal praevia can oftentimes not be felt until dilatation is pretty nearly complete. Simpler than the bag, and a procedure which works just as well, is rupturing the membranes. This allows the presenting part to fall down upon the edge of the placenta and controls bleeding during labor. It should be remembered in this type of case that directly after the head has come through the cervix, so that the neck is lying opposite the marginal praevia, there is no pressure exerted at that instant, so that consequently more bleeding might result. For this reason deliver immediately, with forceps, as soon as the head does come through the cervix. Any of these cases may bleed enough to require transfusion and, if at all necessary, do not hesitate.

Beginning Labor: Only a word as to the bleeding associated with the beginning of labor. This is merely the show, and if it be enough to excite suspicion, vaginal examination revealing nothing, will suggest the only possible cause.

Consider now post-partum hemorrhage. Its causes are:

- Atony of the uterus.
- Retained placenta.
- Partially adherent placenta.
- Lacerations.
- Ruptured varicose veins.
- Unintelligent handling of the third stage.
- Inversion of the uterus.

An *atonic uterus* is one which has lost its tone. Bleeding occurs after the birth of the placenta. The normal contraction and relaxation curve is transposed, so that the uterus is soft and flabby a much longer time than it stays in contraction, or it may stay relaxed all the time and contract none at all. It is a very safe routine to follow the uterus, as the baby is delivered, and hold on to it carefully after the baby is born. If the uterus is not held, the placenta may separate, may not be extruded through the internal os, and may lie in the internal os, acting as a ball valve, behind which a great deal of bleeding may go on. The uterus which is tardy in its contractions bleeds slowly, and a great deal of blood is gradually lost. All uteri should be held for an hour and not left then unless they are in a state of constant, firm contraction. Atony of the uterus is most often seen in (1) hydramnios and twin cases, where the muscle has been unnaturally stretched; (2) long, tedious labors, where its power has been all used up in attempting to rid itself of the baby; (3) precipitate labors where normal retraction has not had sufficient time to occur following contraction. Conducting any one of the

above classes, be particularly watchful of the uterus. A post-partum hemorrhage from an atonic uterus is a very unhappy and fearful sight; the blood may just gush out; the uterine sinuses at the placental site are wide open and will remain so until the muscle contracts to shut them down. It is now customary with many men to give an ampule of pituitrin, subcutaneously, as soon as the baby is delivered. This has no harmful effect and may hasten the placental separation. An intramuscular injection of ergot ought always to follow the placental delivery, where pituitrin has been used.

The treatment of an atonic uterus is to give the muscle some tone. Pituitrin and ergot both are great aids; manual massage and the external application of ice help; hot intrauterine douches are of value. Packing is the last expedient, because of the danger of introducing infection, but it should be done even at the expense of sepsis, when all else fails, because a septic patient is better than one who bleeds to death. If packing has been resorted to, the fundus should still be held. Fatal hemorrhages have occurred behind packs because of uterine relaxation. The after-treatment is the replacement of lost blood—transfusion. If it seems not quite necessary to transfuse, rectal water, intravenous salt or subpectoral salt will very rapidly replace fluid. Morphine is the drug *par excellence*. Strychnine does more harm than good. Raise the foot of the bed, keep the patient warm with heaters and blankets, and subsequently give her all the food, sunlight and fresh air that is possible. Intrauterine packs should be removed in not later than twelve hours; it is unnecessary to give an intrauterine douche after the removal of the pack.

Post-partum hemorrhage due to retained placenta: In such cases, the placenta is known to have separated, the fundus is higher than it should be, the cord has descended, the Credé maneuver has been unsuccessful; the placenta must be removed. It usually is caught at the internal os, and can be removed with no great difficulty or danger. Packing may be necessary as a last resort, when the placenta is got, but usually not. Always etherize the patient. In the manual removal of the placenta very careful asepsis must be observed. Clean gown, clean gloves should be put on. The patient should be under ether, for the removal is painful and any struggling on the part of the patient may do immeasurable harm. The hand not entering the uterus should grasp the fundus from above, thus giving counter resistance to the hand in the uterus. In this connection the succenturiate placenta should be considered. This is diagnosed by seeing on the delivered placenta severed veins, running over cut membranes. If there be bleeding, the succenturiate must be got, and must be manually removed. Such a removal is very dangerous. The vagina cannot be sterilized, and the gloved hand goes through the

vagina and intimately attempts to disengage the placental tissue. Infection often follows. The uterus from which such placental tissue has been removed may need subsequent packing.

The slightly *adherent detached placenta*: This is usually very serious. The detached area has exposed a very big bleeding uterine area, the flowing leads to the belief that the placenta has separated and further time is wasted in attempts to Credé; all the while more bleeding results. Ultimately, the patient has lost much more blood than was realized, and is in poor condition when manual removal of the placenta is attempted. Such patients can lose no more blood. If there is any bleeding at all after the removal of the placenta, pack the uterus without hesitation. Transfusion here is imperative and a life-saver.

Lacerations: The great majority of lacerations caused by childbirth do not cause hemorrhage. Perineal lacerations are repaired at the time for the purpose of bringing together separated tissue, rarely to control bleeding. Bleeding caused by lacerations appears as soon as the baby is born. Cervical lacerations, bad enough to cause post-partum hemorrhage, are seen infrequently nowadays, because accouchement forcé is done so rarely. It is possible for a cervix to be torn badly enough at normal labor to require suturing for the purpose of stopping hemorrhages, but this is very, very rare, and it is also unusual for the cervix to be torn badly in operative delivery where the cervical dilatation has been complete, or nearly so, before operation. Cervical tears are diagnosed by bringing the cervix into view and are treated by suture. Veins near the clitoris, when cut by forceps which extend too far anteriorly, bleed very freely. When recognized and tied, the bleeding is seldom serious and stops immediately. Varicose veins may rupture spontaneously with the birth of the baby. The big grape-like masses so often seen on the labia bleed very profusely, but not really seriously, for counter-pressure or a suture will stop them very quickly. Perineal lacerations rarely involve a small artery or big veins, but the bleeding from these is very quickly stopped in sewing.

Post-partum hemorrhage is also caused by the *unintelligent handling of the third stage*. Too hasty attempts at Credé may cause premature separation of the placenta, with resulting relaxation. There is only one time to Credé a fundus and that is when the placenta has separated. Dogmatically waiting for a given number of contractions sometimes results in leaving the placenta in the uterus after it has separated; other times it results in attempting to express the placenta before it has separated. Placental separation evidences itself in two ways: the descent of the cord, and bleeding. There can be no bleeding unless there be some lacerations, until the placenta separates somewhat or entirely. Too vigorous attempts at Credé result occasionally in inverting the uterus, with or without separa-

tion of the placenta. Inversion may occur spontaneously, but probably infrequently; usually from poor management.

An *inverted uterus* causes post-partum hemorrhage. If the fundus, inside out, appears at the vulva, the diagnosis is simple. If the fundus is not in sight, attempts to look at the cervix to ascertain the cause of bleeding reveal the true condition. The inverted uterus must be replaced. Manual attempts, under ether, may be successful; if not, laparotomy is necessary. Patients in whom the uterus has inverted are usually in profound shock, and transfusion is often necessary.

Before leaving the subject of post-partum bleeding, a closely allied condition should be considered,—the completely adherent placenta. In one sense it is not an emergency, for it causes no bleeding. This condition is one of the most serious complications met with. Fortunately, it is rare. Its seriousness results from sepsis, post-partum bleeding and rupture of the uterus as possible sequelae of its removal. The truly adherent placenta shows no bleeding. After waiting a reasonable time, an hour for example, after the baby comes, during which time there have been contractions but no descent of the cord, or bleeding, the diagnosis of completely adherent placenta is made. It is the usual custom, once the diagnosis is made, to remove the placenta manually. The placental site, where the uterine sinuses are open, is the point where infection most easily occurs. The vagina cannot be sterilized. If nature has not completely attenuated the organisms normally present in the vagina at labor, of course they are carried up into the uterus by the gloved hand. Attempts at separation of the placenta are traumatic, no matter how gently performed, and of course organisms thus introduced are deposited where they will do most harm. Adherent placentas manually removed go septic in at least one-third of the cases and the mortality from the complication is really appalling. As already mentioned, attendant dangers besides sepsis are rupture of the uterus and post-partum hemorrhage, and because of these dangers the manual removal of the placenta is looked upon with much hesitation. Other methods of treatment have been advocated. One man advises, after waiting twelve hours with no evidence of separation, to cut the cord at the introitus and remove the placenta by extraperitoneal hysterotomy. This seems unnecessarily radical. Another suggestion is to leave the placenta in the uterus indefinitely, and do nothing unless bleeding occurs. Theoretically, so long as the placenta remains adherent, and does not get infected (and it must be admitted that going into the uterus through the vagina is the surest way of causing infection) it can do no harm. This conservative inactive method is not generally adopted, but is deserving much consideration. If the placenta is removed manually, small fragments are left behind

which may cause bleeding. If there is any tendency to bleed after removal of the placenta, the uterus should be packed, and if one knows that the uterus has been ruptured, one should consider seriously the need of going into the abdomen. So much for the bleeding cases.

Actual eclampsia as an obstetrical emergency is met with very infrequently where prenatal care has been adequately given. Nevertheless there is an occasional fulminating eclamptic, which comes up even in the best regulated obstetrical practices. The disease, so gradual in its onset, with its slowly rising blood pressure, the increasing urinary abnormalities, once in a while pops up almost overnight. The patient has had no oedema, her urine has been normal, her blood pressure has not risen, and right out of a clear sky a seizure presents. The treatment of such cases is now under advisement. There are two schools: The first says to leave the patient alone, get her kidneys working, give her morphia, do not operate more energetically than to start up labor; the other school bases its opinion upon the hypothesis that the cause of eclampsia is intimately associated with the uterine contents, and that unless an attempt is made to remove these, more absorption will take place, and advises immediate delivery. In one respect, so far as treatment goes, everybody is in accord. No one today advises accouchement forcé. This method of rapidly emptying the uterus was pretty universally in vogue ten or fifteen years ago. Patients not in labor were put on the table with a pulse of 80, the cervix was manually or instrumentally dilated, the baby delivered, the whole process consuming perhaps twenty minutes; the result very frequently was maternal death, and death due to division of the cervix and shock, rather than to eclampsia. Because of this general experience, rapid delivery is no longer entertained. It still seems best, however, to most men, to empty such cases immediately, and this had best be done by abdominal or vaginal Caesarean section, depending upon the duration of pregnancy and the character of the cervix. If seizures occur unannounced in the midst of labor, allow labor to proceed, using oxygen for convulsions, and deliver operatively, when cervical dilatation is complete. Post-partum eclampsia is treated by blood-letting, oxygen for the convulsions, morphia, forcing fluids and catharsis. The after-treatment of any eclamptic is blood-letting, when the blood-pressure remains above 150, and forcing fluids to the limit, getting fluids in by rectum, under the breast, or into the vein. Morphia should be used to the physiological limit. Excessive catharsis is not rational. Repeated large doses of salts surely dehydrate the blood; moderate catharsis is more rational.

Before leaving that part of obstetric emergencies which deals primarily with the mother, consider the rather infrequent complication, obstetrical shock. Obstetrical shock is just like surgical shock. It is characterized by low blood pres-

sure, pallor, thready, rapid pulse, clammy perspiration, and, in general, exhibits a patient in a most extreme condition. This is seen after normal labors as well as after labors prolonged or complicated, after easy non-operative as well as after difficult operative labors. Of course, one is not surprised to see it associated with post-partum hemorrhage, but it is a very distressing and wearisome experience to be summoned a few minutes after attending a perfectly normal, healthy girl through an easy labor, to find her in a state of extreme collapse. One unconsciously feels for the fundus, and finding it hard and firm, with no unusual bleeding, all fear of hemorrhage ceases and one realizes that he has to deal with shock. Such cases when given morphia, heaters, and blankets, with the foot of the bed raised, will come around in a short time, but nevertheless they are very disconcerting. More unpleasant are the shock cases associated with operative delivery (which at the time seemed easy enough, but which, in retrospect, with the patient in a state of collapse, are crowded with alarming possibilities) or with hemorrhage, moderate or severe, which had seemed checked. In addition to the treatment suggested for the previous type, when the element of bleeding has entered, transfusion should be done without delay. The operation can be done immediately, for forethought has summoned on the spot an acceptable donor and transfusion shows the same remarkable effect for these shock cases as for the more or less exsanguinated cases that it has been suggested for previously.

So far the mother has attracted our attention. The emergencies enumerated affect her welfare. The second problem of the obstetrician is the baby, and I say second, advisedly, for the baby should never have preference over the mother, nor should any operative procedure be attempted for the baby, which carries with it any added risk to the mother. The mother comes first, always; not that the baby is not given due consideration! Whenever circumstances arise in labor which militate against the baby, all efforts to save the baby should be entertained, remembering that they should be entertained and executed at no added risk to the mother. Where prenatal care has not been intelligent, mothers with small pelvis in relation to the baby, are often allowed to go into labor for hours, when Caesarean was the only course to pursue, to safeguard both. But when labor has progressed unduly long, where infection in the mother may exist, classical Caesarean, while insuring a living baby, is out of the question; maternal risk is too great. Such cases are willful or ignorant emergencies and are to be treated in one of two ways,—either sacrifice the baby by craniotomy or follow Caesarean by hysterectomy. Pelvic tumors unrecognized before labor, obstructing vaginal delivery, are also ignorant emergencies and hold no real place in a paper which presupposes prenatal care. There are, however,

legitimate foetal emergencies which occur in anyone's practice which need rules of guidance. The condition of the baby during labor is followed by watching the foetal heart rate. We recognize as normal the variations of the foetal heart rate during and after contractions. These are not worrisome, but a distinct drop or rise in foetal rate, maintained and not spasmodic, means something. Such changes are evidences of foetal embarrassment. The cord may be pinched, the labor may be telling on the baby and the baby may be getting tired. If, along with the foetal heart change, there is a discharge of fresh meconium, we know that the baby is embarrassed right now. This embarrassment may be only temporary. Whatever the cause it may right itself in a few moments, and may, on the other hand, be an indication that the baby is truly in bad shape and in dire need of assistance, if it is to be born alive. What is to be done? Upon what shall the decision rest? The answer is simple. Do nothing for the baby at added undue risk to the mother. If labor has progressed so that delivery can be terminated right away, labor should be terminated. Simple forceps through the dilated cervix carries little or no risk and the child has a definite right to this risk, and the patient would want to assume that risk if she were asked. Now, on the other hand, suppose the above mentioned indication of foetal embarrassment presented itself early in labor, is operative interference justified? No operation emptying the uterus immediately can safely be done on the mother when the cervix is not dilated except Caesarean section. If the infant is really embarrassed, a dead infant may be the reward for a major procedure. If, on the other hand, the infant's difficulty is to right itself (and how can this be told?) an unnecessary operation requiring repeated Caesareans at subsequent deliveries will have been done. In such cases the only conservative procedure is to leave things alone. Caesarean is not to be sneezed at. Its mortality is higher than any such ratio of chance warrants, and should be condemned for the above indication.

Prolapse of the Cord: Prolapse of the cord is the only other real emergency occurring during labor, which affects the baby. This cannot occur when the presenting part fits snugly into the pelvis. But if the baby be little in comparison to the pelvis, and the cord long, there is plenty of room for the cord to slide down alongside the presenting part. If there be no presenting part in the pelvis, as in transverse presentations, when the membranes rupture, the cord of course prolapses. The importance of prolapse of the cord is the possibility of pressure on the cord, resulting in foetal asphyxia. Whenever this occurs, when delivery can be done without added undue risk to the mother, delivery from below should be accomplished. If the occiput presents and is low, do forceps; if the occiput is not low, do version. If the cord has been down some time when the patient is first seen, and has ceased to

pulsate, conduct the case without thought of the baby, for the baby is dead. Allow nature to terminate the delivery normally, unless there be a malposition which requires operative interference for its own sake. Very rarely, early in labor, before cervical dilatation has progressed to a stage of safe vaginal delivery, the cord may prolapse. In such a case replace the cord and either use the bag to hasten dilatation or do nothing. Caesarean section for this complication is entirely unwarranted.

CONCLUSIONS.

Prenatal care has accomplished very definite results. It has ruled out patients unfit to bear babies; it strives to keep well those physically fit; it does away with craniotomies by substituting Caesarean at a safe time; it recognizes pelvic tumors obstructing labor; it almost entirely does away with actual eclampsia. Obstetrical emergencies which cannot be foretold or revealed will arise, which need intelligent diagnosis and very intelligent treatment. Obstetrical emergencies are conditions arising which have to do with the mother and the baby. As to the mother, the most important cases are those which bleed before, during, and after labor; these also include the adherent placenta, the inverted uterus and shock. As for the baby, foetal embarrassment due to pinched cord or prolapsed cord should be dealt with only after remembering that the mother should be subjected to no added risk for the sake of the baby.

A CONTRIBUTION TO THE THEORY OF THE LOCALIZATION OF MENTAL FUNCTIONS.*

By HAROLD I. GOSLINE, M.D., HOWARD, R. I.

Pathologist and Clinical Director, State Hospital for Mental Diseases.

ABSTRACT.

- I. The Known
 - A. Anatomy
 1. Known Units
 - B. Physiology
 1. Functional Units
 2. Kinesis
 3. Localization of Sensation and Motion
 - C. Psychology
 1. Sensation, Association, Reaction and Inhibition
- II. Postulates
 - A. Anatomy
 1. From Psychology
 - B. Physiology
 1. Functional Units
 2. Variations in Kinesis
 3. Localization

*Read at the 12th annual meeting of the American Psychopathological Association, Washington, D. C., May 1, 1922.

C. Psychopathology

1. Can be arranged on psychological grounds
2. Variations in Kinesis
3. Localization

III. The Induction

- A. Abnormal Perception and Ideas
- B. Abnormal Actions and States

IV. Conclusions

It will be simpler, perhaps, in attempting to make a contribution to theory, to begin with the known, to begin with facts. These facts can also be grouped as anatomical, physiological and psychological facts.

The anatomical facts, which, as you understand, are the common knowledge of all medical men, will have to be considered for the purpose of this contribution, from a rather special standpoint. I have chosen to call the anatomical elements to be considered "units." Thus, for my purpose, each muscle is a unit, each gland is a unit, each system of fibres in the spinal cord is a unit, each segment of the autonomic system is a unit, though we are all aware that each of these so-called "units" is composed of much simpler histological elements, chemical elements, functional elements or even pathological elements, if they are diseased.

So much for the anatomical side. I might have added articular surfaces to my list of units. I might have added skin, eye, ear, tongue, nose, but I have not attempted a complete list. If we add these, our list is almost complete for my purpose.

Turning to the physiological side, another aspect presents itself. That is, the fact of "functional units." For example, we know that muscle never functions alone except under experimental conditions. It functions in conjunction with its motor nerve and, moreover, it sends centripetal impulses back to the central nervous system—a fact which is not often considered in physiological matters. This combination of motor nerve, muscle and sensory or centripetal nerve, I would regard as a functional unit.

In the same way, for the purposes of this article, we must consider neuro-glandular combinations as unitary in a physiological sense. In the same way, and for the same purpose, we may regard the genito-urinary system as one, though composed of nerve, muscle and gland; the gastro-intestinal system, though composed of nerve, muscle and gland, and the cardio-respiratory system, though composed of nerve and muscle almost exclusively. Perhaps these latter, the cardio-respiratory, gastro-intestinal and genito-urinary, are better called physiological systems than physiological units. However that may be, the point that I want to bring home is that for the purpose of this paper, they must be considered together, whether you call them units or

systems. To these we might add the glands of internal secretion, perhaps, calling each with its appropriate nerves a unit and the entire set of opponents a system. However you do it, the main point, I think, must be clear.

There is another peculiarity in the physiology of these units or systems which is of a very general biological nature. By that, I mean, that this peculiarity does not end with either systems or units, but seems to apply to the simpler histological elements, and even to chemical and physical phenomena. That is the matter of force and direction, or order. Physical phenomena, chemical phenomena, the functions of the cell, of the unit or of the system, take place with a certain force and in a certain direction, or—to put the last in other words—with a certain orderliness. This observation seems to be of a fundamental sort, for this phenomenon appears to be due to the nature of matter and force. At least, so far, we have no other scientific explanation of it. This form of force, I prefer to call kinetic, thus linking it up somehow with that form of energy known as kinetic, and at the same time distinguishing it from static, which it is not, and from dynamic, which means both static and kinetic, and which is, for that reason, too comprehensive a term.

As for localization, anatomically and physiologically, we know, fairly well, certain of the cortical areas which have to do with the movement of striated muscle. We know those which have to do with certain of the senses, namely, the special senses, and to some extent skin sensibility. But there are large areas of the cortex which have not been mapped out as to function.

Of the subcortical ganglia we know indirectly and by direct experiment that certain parts are concerned with the bladder and genital region, that other parts control the motor expression of the emotions, and so on. Some of this knowledge is very definite and well rounded, more of it is still in that hazy stage preceding absolute certainty.

Turning finally to the psychological side, we have as elements or units sensation, association, reaction and inhibition. All other psychological processes are systems reducible to these units. Thus perceptions of all kinds can be reduced to these four units whether they are simple perceptions of concrete objects in the environment or whether they are complex perceptions such as those of space, time and meaning. All ideas, whether memory, imaginative, or general, can be reduced to these. All activities, whether those of will, of attention, or of thinking, are made up of them. All of our inner states, such as feelings, whether simple or complex, emotions, and attitudes, consist of them. Finally it may be said that the personality, consisting of an interplay of perceptions, ideas, activities, and inner states, is merely an expression of the manifold ways in which the organism senses, associates, reacts, and inhibits. Even such

things as self-consciousness, unity of personality, variations in personality, the feeling that the self takes an incomparable rôle, the consciousness of identity in successive periods of time, or the fact that the mind is thought of as representing the real personality and that the body seems to belong to the outside world, all fail to escape the thrallhold of sensation, association, reaction, and inhibition.

The personality is the product of the interrelations and interactions of all these psychological systems and each system reduces to the four elements or units, which I have named, now so often.

From this ground material, the writer has attempted to raise a superstructure the postulates of which now follow. Beginning again with the anatomical side, we may postulate that the so-called association pathways in the brain do not connect one sensory centre with another directly, as has been supposed by the anatomists till now. These pathways rather connect the sensory centres for the muscle sense with those for the other senses and probably also connect the cortex with the basal ganglia, the fibres forming these latter pathways most probably running some in the one direction and some in the other, so far as we can judge on present information.

This postulate is made because of the nature of association, speaking psychologically. Moreover, we know of no instance where an ether wave may produce a sensation of sound, or where an air wave may produce a sensation of light. I might take up all the sensations in the same way but these examples above ought to carry my meaning to you.

If what I have said be true, we may add this system of fibres to our others. We have postulated a fibre system, known to exist, it is true, but not thought of in just this way, I imagine.

The function of this set of fibres then is sensory-sensory (perhaps associational in this way), that is to say, it links muscle sense with the other senses. We have then another functional unit, a postulated functional unit, the sensory-sensory neurone or the sensory-sensory system of fibres.

Referring again to the matter of energy or force, which we have been pleased to call kinesis, we may postulate that this force varies both in energy and in direction or orderliness. The variations in force we may assemble into those which are greater than usual and those which are less than usual. The former may be called hyperkinesis and the latter hypokinesis. The variations in direction or orderliness of this force we may call ataxia.

A study of these terms and of the conceptions embodied in them has led me to conclude that they are broad enough to include all variations both in the reaction of the normal and the pathological. They represent general ideas of a very broad and inclusive sort and yet specific enough in their generality to permit application

to every known case both in normal physiology and in pathology.

The last of my postulates in the physiological field is that the unmapped areas of the brain, the so-called silent areas, are probably sensory in nature and take in the gustatory, warm, cold, pain and touch senses which so far have not been thoroughly mapped out for the entire body; next that the physiological systems or units known so well and for so long, do probably take part in every mental process by virtue of the fact that they constitute the anatomical and physiological agents of reaction and inhibition, and, finally, that this interplay of nerve cells, peripheral and central, cerebro-spinal and autonomic, together with their muscular and glandular end organs, is all there is to what we call mind. To explain further: When one says "perception" he merely expresses in a word the functioning of certain neuro-muscular, neuro-glandular and nervous units or systems. When he says "idea" he expresses another phase of function in the same apparatuses. And the same is true when he says "activity" or "inner state."

And when he says that a perception was normal or when he sees from his examination of a patient that the patient perceives normally, he understands in that observation that the neuro-muscular, neuro-glandular and nervous mechanisms subserving the given perception are normally functioning. The same facts are evidence in the case of ideas, activities or inner states. And if the personality is normal, such normality testifies, by itself alone, to the normality of these systems which I have named.

We have one more field in which to make our postulates before turning to the induction. In the field of psychopathology we may postulate, first, that all the symptoms that patients show may be grouped on psychological grounds. Thus our patients show disorders of personality which are due to disorders of self-consciousness, to changes in the feeling that the self takes an incomparable rôle, to change in the consciousness of identity or to change in that distinction between the mind and the body or to changes in those inner states, activities, ideas and perceptions which we have enumerated earlier.

Our knowledge of the structure of attitudes, emotions and feelings takes them back to reactions and inhibitions directly and through ideas to the sensations. Our knowledge of the structure of thought, attention and will shows the same. Our knowledge of the structure of ideas takes us through perceptions and our knowledge of the structure of perceptions takes us directly back to the four psychological elements. The anatomical elements or units we know fairly well. The physiological units we know also fairly well. Our postulates make it proper for us to group our psychopathology into hyperkineses, hypokineses and ataxias.

The inductions follow. In the first place, we may conclude that perceptions and ideas, if normal, mean that the cerebral cortex is normal. In the next place, we may conclude that if the activities and inner states are normal, the basal ganglia, autonomic and muscle and gland systems are normal.

If perceptions and ideas are abnormal, we may conclude that there is trouble somewhere, but we cannot say on that fact alone where the trouble is, especially if the trouble is a hyperkinetic or ataxic one. If it is hypokinetic or an extreme case that might be called akinetic, we may feel sure that the trouble is cortical.

If the abnormality is in the activities or inner states, we may follow the same reasoning. If it is an hypokinesis or akinosis the trouble is at least extra-cortical; if ataxic or hyperkinetic, it may be anywhere.

In practical cases the presence of an hyperkinetic symptom here and of an hypokinetic or akinetic one there serves to fix the trouble fairly well as to whether it is extra-cortical or whether it is cortical. If this can be done in every case of psychopathy, the practical meaning of this induction is of course tremendous.

The final end of this study should be to establish psychiatric diagnosis upon an anatomical and upon a physiological ground. Then we can add our etiological factor in each case, give our prognosis and prescribe our treatment in a thoroughly logical and scientific manner. Psychiatry will then become a part of general medicine. Psychology has made the first step. It is now distinctly the business of physiology to tell us more within its field and to chemistry and pharmacology to give us a rational therapeutics.

NOTE 1: Two elements I have omitted in this discussion. One is the effect of innate tendencies, the other the effect of training or habit. These may also affect physiological systems, making them over-function or under-function or function in an ataxic manner. Of course, in such cases we need reëducation and not chemotherapy. For prevention of such cases we need all the means being developed by the mental hygiene movement and not so much the prevention of physical disease. The prevention of the kinds produced by physical means will be aided by the prevention of syphilis, alcoholism, tuberculosis and by every well-organized public health measure which we have.

NOTE 2: According to the plan outlined here every diagnosis in psychiatry can be arranged as follows:

Physiology	Anatomy	Etiology
Hyperkinesis	Cortical Subcortical, etc.	Alcohol, Syphilis, etc.
Hypokinesis	Cortical, Subcortical, etc.	Alcohol, Syphilis, etc.
Ataxia	Cortical, Subcortical, etc.	Alcohol, Syphilis, etc.

Prognosis	Treatment
Usual expressions	Consider all factors
Usual expressions	Consider all factors
Usual expressions	Consider all factors

It may be that this formula is general enough to include all forms of disease. That, I have neither time nor inclination to pursue into its details at present.

The Massachusetts Medical Society.

PROCEEDINGS OF THE COUNCIL.

STATED MEETING, OCTOBER 4, 1922.

A STATED meeting of the Council was held in the Boston Medical Library, at 12 o'clock noon, October 4, 1922. The President, Dr. John W. Bartol, was in the chair and the following 106 Councilors present:

BARNSTABLE, W. D. Kinney.	MIDDLESEX SOUTH, E. W. Barron, E. H. Bigelow, F. G. Curtis, C. B. Fuller, F. J. Goodridge, C. E. Hills, L. H. Jack, F. R. Joubert, S. F. McKeen, C. E. Mongan, J. W. Sever, F. G. Smith, E. H. Stevens, A. K. Stone, Fresenius Van Nijys.
BERKSHIRE, A. P. Merrill.	NORFOLK, E. H. Baxter, D. N. Blakely, E. H. Brigham, A. B. Broughton, W. L. Burrage, W. A. Griffin, F. C. Jilison, G. W. Kaan, Bradford Kent, Hale Powers, Victor Safford, G. H. Scott, W. J. Walton, Augusta G. Williams.
BRISTOL NORTH, Sumner Coolidge, F. A. Hubbard.	ESSEX NORTH, R. V. Baketel, J. J. Bartley, J. Forrest Burnham, W. W. Ferrin, T. R. Healy, A. M. Hubbell, G. E. Kurth, F. D. McAllister.
BRISTOL SOUTH, E. F. Cody.	ESSEX SOUTH, F. W. Baldwin, J. F. Donaldson, H. K. Foster, W. T. Hopkins, J. F. Jordan, W. G. Phippen, A. N. Sargent, J. W. Trask.
ESSEX NORTH, R. V. Baketel, J. J. Bartley, J. Forrest Burnham, W. W. Ferrin, T. R. Healy, A. M. Hubbell, G. E. Kurth, F. D. McAllister.	FRANKLIN, B. P. Croft, G. P. Twitchell.
ESSEX SOUTH, F. W. Baldwin, J. F. Donaldson, H. K. Foster, W. T. Hopkins, J. F. Jordan, W. G. Phippen, A. N. Sargent, J. W. Trask.	HAMPDEN, E. P. Bagg, Jr., A. C. Eastman, G. H. Jones, J. P. Schneider.
FRANKLIN, B. P. Croft, G. P. Twitchell.	MIDDLESEX EAST, L. M. Crosby, C. E. Ordway.
HAMPDEN, E. P. Bagg, Jr., A. C. Eastman, G. H. Jones, J. P. Schneider.	MIDDLESEX NORTH, W. B. Jackson, J. A. Mehan.
MIDDLESEX EAST, L. M. Crosby, C. E. Ordway.	NORFOLK SOUTH, C. S. Adams, O. H. Howe, G. M. Sheahan.
MIDDLESEX NORTH, W. B. Jackson, J. A. Mehan.	PLYMOUTH, A. L. Beale, W. C. Keith, Gilman Osgood, F. G. Wheatley.

SUFFOLK.

J. W. Bartol.
Robert Bonney.
E. G. Brackett.
M. E. Champion.
Loretta J. Cummins.
Lincoln Davis.
G. B. Fenwick.
G. S. Hill.
W. C. Howe.
J. C. Hubbard.
H. T. Hutchins.
Donald Macomber.
G. B. Magrath.
R. H. Miller.
E. H. Place.
W. H. Robey.
Stephen Rushmore.
C. L. Scudder.
J. S. Stone.

SUFFOLK (continued).

Louisa P. Tingley.
F. H. Williams.

WORCESTER.

F. H. Baker.
W. P. Bowers.
L. R. Bragg.
G. A. Dix.
G. E. Emery.
Homer Gaze.
J. J. Goodwin.
R. W. Greene.
E. L. Hunt.
A. G. Hard.
A. W. Marsh.
C. H. Stevens.
F. H. Washburn.

WORCESTER NORTH.

A. H. Quessy.

The record of the last meeting was read in abstract by the Secretary and approved by vote.

The President referred feelingly to the sudden death of Dr. William Andrew Dolan, of Fall River, for 21 years a councilor and supervising censor of the Bristol South District, at his home in Fall River on October 1st, at the age of 64. "Dr. Dolan, of Irish-Scotch ancestry, a native of Shirley, Mass., had graduated at St. Joseph's College, New Brunswick, in affiliation with Laval University, in 1879, and then from the medical department of the University of Pennsylvania, where he received his M.D. in 1882. After completing a service as house surgeon at St. Peter's Hospital, Albany, N. Y., he settled in practice in Fall River. In 1891 he was appointed medical examiner by Governor William E. Russell, holding that office at the time of the celebrated Lizzie Borden murder trial. He was a member of the school board and in 1900 was president of the Bristol South District Medical Society, the following year being elected councilor and supervising censor, the positions he filled so acceptably and faithfully for such a long period. Few meetings were held without his presence and active participation in the deliberations. He was looked up to and his judgment was valued by everyone who came in contact with him. As we saw him here—intelligent, pertinacious, unmoved by expressions of approval or disapproval, in a popular sense holding to his own, he presented an example for us all which we must always value."

The Chair announced the members of the Gorgas Memorial Committee, which he had appointed under the vote of the Society at its meeting on June 14, 1922. The names follow:

F. C. Shattuck, *Chairman*
S. B. Woodward
E. H. Stevens
F. B. Lund
W. H. Robey

He explained that according to past custom the Committee of Arrangements for the annual meeting would be called on for a statement of

the provisional plans that had been made, that standing committee in the present situation having immediate charge of the preparation of the matter for the official program and of the general arrangements in coöperation with the President, while the local arrangements would be attended to by a supplementary committee of men in Pittsfield and the surrounding territory. In the absence of Dr. K. G. Perey, chairman of the standing committee, Dr. A. P. Merrill, of Pittsfield, was called on and said that while the details of the meeting had not yet been made the work had been started and the meeting places and a part of the program outlined. The Pittsfield members wanted to have a large attendance and hoped to give an instructive and interesting meeting. They planned to send a questionnaire to all of the Fellows asking whether they would attend and how many guests they would bring with them, so that definite plans could be perfected for entertaining all that might come. The Chair thought that the meeting was sure to be a successful one and hoped that the entire society would join in efforts to make it a notable occasion. In accordance with the suggestions that had been made to him he nominated the following local Committee of Arrangements for the meeting in Pittsfield on June 12 and 13, 1923, and they were appointed, by vote:

A. P. Merrill, *Chairman*
B. W. Paddock
J. B. Thomas
C. H. Richardson
P. J. Sullivan

At the behest of the standing Committee on Publications and Scientific Papers the Secretary read a letter from Dr. Dean Lewis, of Chicago, accepting his appointment as Shattuck Lecturer for the meeting in 1923.

Dr. D. N. Blakely, Chairman of the Committee on Membership and Finance, reported for that committee on the name of General Leonard Wood, nominated for honorary membership at the meeting of the Council on June 13, 1922, and referred to his committee under the provisions of Chapter I, Section 4, of the by-laws, that the committee confirmed the nomination and recommended his election. General Wood was thereupon elected to honorary membership by a unanimous vote, by a show of hands.

Dr. Blakely then read the remaining sections of his report on membership, those numbered 2, 3, 4 and 5. Under No. 2,—those who were to be allowed to resign,—Dr. W. P. Bowers objected to the name of Philip A. E. Sheppard, of 253 Newbury Street, Boston, stating that having been connected in 1917 with the Gordon Bible College and informed by the Committee on Ethics and Discipline that it was unethical to publish advertising matter concerning that college and his connection with it, Sheppard had lately deliberately taken up the practice of

chiropractic, announcing himself on his street sign and in the telephone directory as a practitioner of that cult; then he had taken up the Abrams' cult of electronic reactions and ohms. While applying that treatment he promised to cure a young man, for a large money consideration, of so many ohms of syphilis and so many ohms of sarcoma. The matter was placed before the Committee on Ethics and Discipline and that committee saw fit to ask for Dr. Sheppard's resignation while bringing the matter to the attention of the Massachusetts Board of Registration in Medicine. That board after several hearings, at which Dr. Sheppard was represented by eminent legal counsel, revoked his license to practice in the State. Dr. Bowers thought that if the Massachusetts Medical Society stands for ethical practice it is reasonable to suppose that a man who has shown himself to be unethical should be expelled and not be allowed to resign. A somewhat similar case had come up in 1918 where an unethical practitioner had not been allowed to resign, by vote of the Council; charges had been preferred against him subsequently by the Committee on Ethics and Discipline, a trial was held and he had been expelled by vote of the Society.

Dr. E. H. Bigelow favored the remarks of Dr. Bowers. It had been an old custom in New England to clean house once a year or oftener: the robe of the Society was not broad enough to cover a man who prostitutes himself for money; he hoped the case of Dr. Sheppard would be referred back to the Committee on Ethics and Discipline. On motion by Dr. Bowers it was *voted*: That the name of Philip A. E. Sheppard,—No. 6 on the list of the Committee on Membership and Finance, to be allowed to resign,—be stricken from said list and the case recommitted to the Committee on Ethics and Discipline for another recommendation as to the status of this Fellow.

On motions by G. W. Kaan, A. N. Broughton, Lincoln Davis and E. L. Hunt the names of B. N. Bridgman, Roy Garland, W. L. Smith and A. G. Kilbourne, offered respectively, were stricken from Section 4—33 names of Fellows to be deprived for non-payment of dues—of the report of the Committee on Membership and Finance, leaving twenty-nine names. As amended the report as a whole was accepted and its recommendations adopted.

REPORT OF COMMITTEE ON MEMBERSHIP AND FINANCE AS TO MEMBERSHIP.

The Committee on Membership and Finance makes the following recommendations as to membership:

1. At the last meeting of the Council, June 13th, 1922, General Leonard Wood of the Philippine Islands was nominated for Honorary Membership in the Massachusetts Medical Society, under the provisions of Chapter I, Section 4, of the by-laws.

Your Committee confirms this nomination, and recommends his election.

2. That the following named five Fellows be al-

lowed to resign under the provisions of Chapter I, Section 5, of the by-laws:

Connor, Homer Leigh, of Omaha, Nebraska (Major M.C.U.S.A.), as of Jan. 1, 1923.

Glidden, Edson Williams of Alto, Ga. (State Sanatorium), as of Jan. 1, 1922, with remission of dues for 1920-21.

Golden, Ross, of New York City (Presbyterian Hospital), as of Jan. 1, 1923.

Jones, Basil Bradbury, of Los Angeles, Calif. (Brookman Building), as of Jan. 1, 1923.

Schuck, Clara Margaret, of Boulder, Colorado (Boulder, Colorado, Sanatorium), as of Jan. 1, 1923.

3. That the following named nine Fellows have their dues remitted under the provisions of Chapter I, Section 6, of the by-laws.

4. That the following named twenty-nine Fellows be deprived of the privileges of Fellowship, under the provisions of Chapter I, Section 8, of the by-laws:

Aaronson, Jacob, of Chelsea (286 Chestnut Street).
Adamian, Hovsep Garo, of Fresno, Calif. (2424 Ventura Avenue).

Aimone, Victor Anthony, formerly of Cambridge.
Azadian, David George, formerly of Ellsworth, Pa.
Beaudet, Elphege Alcime, of Lowell (268 West 6th Street).

Bolduc, Albert George, of Bayonne, N. J. (847 Avenue C).

Carley, Margaret Elizabeth, of Brooklyn, N. Y. (150 Columbia Heights).

Crandall, Walter Midkiff, of Northwood Narrows, N. H.

Fregau, Aime Napoleon, formerly of Fitchburg.

Greany, William Francis, of Holyoke (644 Dwight Street).

Grover, Arthur Leon, of Los Angeles, Calif. (4621 S. Gramercy Place).

Guy, Walter Bryant, of St. Augustine, Florida.

Hamblen, Howard, of South Windham, Maine.

Hegarty, Joseph Gordon, of Boston (21 Bay State Road).

Hill, Lawrence Richardson, of Concord, N. H. (48 Pleasant Street).

Kelley, Robert Edward Stack, formerly of Mattapan.

Koplin, Harry, of Los Angeles, Calif. (4408½ Monita Avenue).

Lawlor, John Charles, formerly of Dover, N. H.

MacKinnon, Donald Lauchlin, of Truro, N. S. (Prince Street).

Mahar, Harold Robert Collins, of Orange (Prospect Street).

Mayers, John Edward, of Santa Monica, Calif. (First National Bank Building, Ocean Park).

McConnell, David James, formerly of Greenfield.

McDonald, William Joseph, formerly of Brookline.

Pillsbury, Arthur Russell, of West Roxbury (U.S.P.H.).

Robertson, Jessie Wilhelmine, of Cambridge (1388 Mass. Ave.).

Scott, Norman McLean, formerly of Boston (536 Commonwealth Ave.).

Seibels, Robert Emmet, formerly of Springfield.

Stevenson, Effie Alleyne, of Agnew, Calif. (Agnew State Hospital).

Whitcomb, Clarence Adelbert, formerly of Springfield.

5. That the following named seventeen Fellows be allowed to change their membership from one district society to another without change of legal residence, under the provisions of Chapter III, Section 3, of the by-laws:

Dudley, Oscar A., Wayland, from Middlesex South to Worcester.

Morrison, William R., Brighton, from Middlesex South to Suffolk.

Parker, Willard S., Watertown, from Middlesex South to Suffolk.
 Richards, Thomas K., Cambridge, from Middlesex South to Suffolk.
 Shedden, Wm. M., West Newton, from Middlesex South to Suffolk.
 Thom, Douglas A., Belmont, from Middlesex South to Suffolk.
 Wilinsky, Charles F., Allston, from Middlesex South to Suffolk.
 Wright, J. Homer, Newton Center, from Middlesex South to Suffolk.
 Maynard, Herbert E., Winchester, from Middlesex East to Suffolk.
 Brown, Lloyd T., Milton, from Norfolk to Suffolk.
 Foley, John A., Dorchester, from Norfolk to Suffolk.
 Miller, Richard H., Roxbury, from Norfolk to Suffolk.
 Mysel, Philip, Roxbury, from Norfolk to Suffolk.
 Papas, Prodromos N., Brookline, from Norfolk to Suffolk.
 Phaneuf, Louis E., Brookline, from Norfolk to Suffolk.
 Richardson, Oscar, Roxbury, from Norfolk to Suffolk.
 Saegez, Ernest T., Brookline, from Norfolk to Suffolk.

D. N. BLAKELY, *Chairman*.

Reports of the committees appointed at the June meeting of the Council to consider the following petitions were read by the Secretary and each report was accepted by vote under the usual conditions: A. A. Pastene, W. A. Millet, J. Z. Naurison, J. T. Buckley, W. H. Gallagher, F. R. Tower. In the case of S. K. Pachanian it was voted to restore him provided he pay the dues for the current year within one month. In the case of H. A. Field the report recommended not accepting his petition and it was voted not to restore him.

On nomination by the President the following committees were appointed to consider petitions for restoration to the privileges of fellowship:

For T. E. A. McCurdy—S. H. Ayer, P. M. Smith, B. W. Pond.

For D. H. Shulman—Max Sturnick, W. W. Duckering, J. W. Lane.

For O. R. Fountain—N. P. Breed, W. T. Hopkins, Butler Metzger.

On nomination by the President the following were appointed a committee to audit the treasurer's accounts: R. G. Wadsworth, F. G. Balch. In the same way these were appointed delegates to the annual meeting of the Vermont State Medical Society at Burlington, October 12 and 13, 1923: A. P. Merrill, Pittsfield; E. J. Sawyer, Boston.

Dr. D. N. Blakely read the report of the Committee on Membership and Finance as to Finance. It was accepted and its recommendations adopted.

REPORT OF COMMITTEE ON MEMBERSHIP AND FINANCE AS TO FINANCE.

The Committee on Membership and Finance makes the following recommendations as to Finance:

1. That the annual assessment for 1923 be \$9.00, instead of \$10.00, as at present. This is because of the success, financial and otherwise, which has at-

tended the present management of the BOSTON MEDICAL AND SURGICAL JOURNAL, which has resulted in a material lessening of the expense of the JOURNAL to the Society.

2. That an appropriation of \$300 be made for the Committee on Maternal and Infant Welfare, to enable it to carry on the work already begun. This is to supplement the appropriation of \$350 made at the February meeting.

3. At the June meeting of the Council a letter was read from the Committee having in charge the project of a permanent memorial in Charlton, Massachusetts to Dr. William T. G. Morton, asking the Massachusetts Medical Society to cooperate with that Committee in raising funds for the memorial. Your Committee, while in general approving the plan for this memorial, is convinced that it would be inadvisable for the Society to make an exception to its usual rule, or tradition, not to make appropriations for projects of a similar nature, and, therefore, recommends that no further action be taken.

4. It appears probable that, after the bills of the current year have been paid, there will remain a substantial balance in the Treasury. Your Committee recommends that the Treasurer be authorized to transfer to the Permanent Fund such part of the balance as in his judgment shall seem advisable, to an amount not exceeding \$10,000.

D. N. BLAKELY, *Chairman*.

Reporting for the committee appointed by vote of the Society, June 14, 1922, concerning the amount of funds the Society is authorized to hold, under the terms of its charter, the Secretary read the following letter from E. P. Saltonstall, Esq., counsel of the Society:

BARRISTERS HALL, BOSTON,

September 14, 1922.

DR. JOHN W. BARTOL, *President*, and DR. WALTER L. BURRAGE, *Secretary*, Massachusetts Medical Society,
 Gentlemen:

On September sixth last, Dr. Burrage sent me a copy of the proceedings of the Society at the annual meeting on June 13 and 14, 1922, and called my attention to pages 13, 50, 51, and 52, of the printed copy of the proceedings, on the last of which pages it was:

"*Moved*, that a committee be appointed, consisting of the President and Secretary, who in conference with legal counsel shall prepare a petition to the next General Court for the enactment of an amendment to Chapter 15, Section 9, of the Statutes of 1781, to bring said section into conformity with Chapter 180, Section 9, of the General Laws of Massachusetts, 1921, relating to charitable corporations, such proposed amendment to be submitted to the Council at the October meeting for approval."

I have looked into this matter with great care, and I feel very certain that no such amendment is necessary. By this I mean that the only limit to the holding of funds by the Massachusetts Medical Society is that imposed by Chapter 180, Section 9, of the General Laws of 1921, said limit being \$2,000,000.

This section is correctly printed at the bottom of page 51 and top of page 52 in the printed copy of the proceedings of the Society, June 13 and 14, 1922, heretofore referred to.

My reason for coming to this law conclusion is, as follows:

The General Laws of 1921, as you probably know, are a new codification of all the pre-existing statutes of Massachusetts. The previous codification, known as the Revised Laws, which took effect in January,

1902, by Section 8 of Chapter 125, which dealt with, "Corporations for Charitable and other purposes," and would include the Massachusetts Medical Society, limited the amount of property to be held by such corporations, "to an amount not exceeding one million five hundred thousand dollars." In 1915 the Legislature passed the following Act:

GENERAL ACTS, 1915.

Chap. 200—AN ACT RELATIVE TO THE LIMITATION OF PROPERTY OWNED BY CHARITABLE AND OTHER CORPORATIONS.

"Section 1. Every corporation heretofore organized by special act of the legislature for a purpose or purposes for which corporations may be organized under the provisions of chapter one hundred and twenty-five of the Revised Laws, and acts in amendment thereof or in addition thereto, may *despite any provisions contained in its charter*, acquire and hold real and personal estate to an amount not exceeding one million five hundred thousand dollars, in accordance with section eight of said chapter one hundred and twenty-five.

"Section 2. This act shall not be construed to limit the amount of real and personal estate which may be held by any corporation whose charter allows it to hold an amount greater than that mentioned in Section one hereof."

(The italics inserted by me.)

In 1917 the Legislature passed the following Act:

GENERAL ACTS, 1917.

Chap. 45—AN ACT RELATIVE TO THE LIMITATION OF PROPERTY OWNED BY CHARITABLE AND OTHER CORPORATIONS.

"Section 1. Section eight of chapter one hundred and twenty-five of the Revised Laws is hereby amended by striking out the words 'one million five hundred thousand,' in the fourth and fifth lines, and inserting in place thereof the words:—two million,—so as to read as follows: *Section 8.* Any corporation organized under general or special laws for any of the purposes mentioned in section two, and under sections thirteen to sixteen, inclusive, may hold real and personal estate to an amount not exceeding two million dollars, which shall be devoted to the purposes set forth in its charter or agreement of association, and it may receive and hold, in trust or otherwise, funds received by gift or bequest to be devoted by it to such purposes.

"Section 2. Section one of chapter two hundred and nine of the General Acts of the year nineteen hundred and fifteen is hereby amended by striking out the words 'one million five hundred thousand' in the eighth line, and inserting in place thereof the words:—two million,—so as to read as follows:—*Section 1.* Every corporation heretofore organized by special act of the legislature for a purpose or purposes for which corporations may be organized under the provisions of chapter one hundred and twenty-five of the Revised Laws, and acts in amendment thereof or in addition thereto, may, despite any provisions contained in its charter, acquire and hold real and personal estate to an amount not exceeding two million dollars, in accordance with section eight of said chapter one hundred and twenty-five.

"Section 3. Nothing herein contained shall be construed to limit the amount of property that may be held by any corporation under the authority of a special act of incorporation or of any special law, whereby it is permitted to hold an amount exceeding two million dollars."

From the foregoing it is apparent that by Chapter 200 of the Acts of 1915, quoted above, the Legislature passed an Act which may be said to have been explanatory of Revised Laws, Chapter 125, Section 8,

declaring that nothing in the original charter of such corporations, limiting their power to hold funds to an amount less than \$1,500,000, should be binding upon them.

In 1917, by General Acts of 1917, Chapter 45, the Legislature raised this amount of \$1,500,000 to \$2,000,000, and again by Section 2 of that Act, stated that they might hold such a sum despite any provisions contained in their charter.

When the General Laws of 1921 were prepared, it was evidently felt by those preparing the codification, that the language of the section was sufficiently broad and definite to make it unnecessary to include the words, "despite any provisions contained in its charter" which are found in General Acts of 1917, Chapter 45.

With this history of the law I feel very safe in advising you as I have.

Article X, "Funds," of your Articles of Incorporation, which is printed in the "Digest, By-Laws, Code of Ethics and Malpractice Act of the Massachusetts Medical Society," is misleading as it now stands. It should appear at the end of that Article that it has been altered in the manner in which I have set forth in my letter.

If there is anything further which you wish me to do on this matter, or any further explanation which I can give you, do not fail to call upon me.

Very truly yours,

E. P. SALTONSTALL.

The Chair explained that counsel thought best to indicate in the "Digest" of the laws of the Commonwealth concerning the Society what the present situation as to funds is, therefore the committee had drafted a motion covering this matter. The motion was offered by Dr. H. T. Hutchins, who had brought in the motion for a committee last June; was seconded and carried unanimously.

Moved. That a statement worded as follows be printed at the end of Article X, Paragraph one, of the DIGEST of the Statutes of the Commonwealth of Massachusetts relating to the Massachusetts Medical Society:

"In the opinion of Endicott P. Saltonstall, Esq., Counsel for the Society, duly rendered September 14, 1922, to the President and Secretary,—a special committee duly acting by vote of the Society, June 14, 1922,—Section 9, Chapter 15, of the Statutes of 1781, is so far modified by Section 1, Chapter 200, of the General Acts of the year 1915, and by Sections 1 and 2, Chapter 45, of the General Acts of the year 1917, all being codified in the 'General Laws' of 1921, Section 9, Chapter 180, that the Society without amendment to its Charter, is, in common with any charitable corporation, permitted to acquire and hold real and personal estate to any amount not exceeding two million dollars, 'despite any provisions contained in its charter.'"

The committee appointed in June to arrange for a joint meeting or meetings of the State medical societies of New England, namely, Dr. J. W. Bartol, Dr. W. P. Bowers and Dr. A. P. Merrill, made a preliminary report through Dr. Bowers. He said the committee had been active in trying to ascertain the sentiment toward this project throughout New England; letters had been sent to the officers of the State medical societies and to other prominent practitioners; the replies had been almost unanimously in favor; the committee was ready to continue to function

and to ascertain the wishes of the different States and to hold a meeting in the near future of the representatives of these State societies for that purpose. On motion by Dr. J. S. Stone it was voted that the committee be continued and that the Council expresses its opinion in favor of holding such a combined meeting if possible.

Dr. H. G. Stetson, of Greenfield, read a report of the delegation from the Massachusetts Medical Society to the sessions of the House of Delegates of the American Medical Association, at St. Louis, last May (See Appendix). The report was discussed by Dr. C. E. Mongan, one of the delegates, who described some of the currents that ebbed and flowed in the House of Delegates. He thought that an error had been made in doing away with the weaker medical colleges, such as Dartmouth and Bowdoin, for now there are only five medical colleges in New England where a man can get a first-rate medical education,—not enough, to his mind, to provide practitioners for such a large territory. Such problems, affecting the whole medical profession, ought to have long consideration by authoritative medical bodies before they were acted on. He spoke also on the amendment to the constitution of the American Medical Association limiting membership in the House of Delegates, that he had proposed. It was voted to accept the report and to place it on file.

The Chair announced the officers of the new Section of Obstetrics and Gynecology that he had appointed under the terms of the vote of the Council last June: C. E. Mongan, Somerville, *Chairman*; F. C. Irving, Boston, *Secretary*.

Upon nomination by the President, Dr. C. J. Leary, of New Bedford, was elected counselor and supervising censor for Bristol South to fill the vacancy caused by the death of Dr. W. A. Dolan.

The Chair stated that at the annual meeting of the Council Dr. Croft of Franklin had presented a set of resolutions with relation to holding one or more of the meetings of the Council in Springfield or Worcester, that the expense of carfare of the councilors attending meetings of that body be paid from the treasury of the Society and that the resolutions be submitted to the eighteen district societies before final action on them be taken. The Chair hoped that there would be a definite expression of opinion on this question by the districts. The Secretary stated that thus far he had heard from only six districts, three of them being opposed to the purport of the resolutions, two in favor and one noncommittal. On being asked if he had anything to say at that time Dr. Croft said he had not.

The Standing Committee on Public Health reported through the chairman, Dr. Bigelow, on Dr. Mongan's motion as to the definition of

"public health" and "public health nurse" that had been committed to them, as follows:

Public Health.—Public Health has for its objective the promotion of the physical and mental well-being of the public, through preventive, educative or therapeutic measures.

Public Health Nurse.—A Public Health Nurse is a registered graduate nurse who is employed by, and who acts as, an agent of a statutory public health organization.

This was discussed by Dr. Mongan, Dr. E. F. Cody of Bristol South, Dr. A. H. Quessy of Worcester North, and Dr. G. M. Sheahan of Norfolk South. Dr. Mongan wondered where public health begins and private health leaves off in the consideration of the many problems of the day, notably in the matter of child hygiene and prenatal care. Dr. Cody championed the definition of the Committee on Public Health, of which he is a member. Dr. Quessy drew a distinction between community health, or public health, and the health of the individual, thinking that the former should not be allowed to trespass on the latter,—a tendency he noted in recent health legislation, a step toward social medicine. The department of labor and industry should concern itself solely with the individual, while the department of public health should have to do with the public alone, as set forth in this State by the opinion of an attorney general. Dr. Sheahan said he did not know whether the socialization of medicine was for the best or not; there were arguments on both sides. He was in favor of the views expressed by Dr. Quessy.

Adjourned at 2 P. M.

WALTER L. BURRAGE, *Secretary*.

APPENDIX TO THE PROCEEDINGS OF THE COUNCIL, OCT. 4, 1922.

REPORT OF DELEGATES FROM THE MASSACHUSETTS MEDICAL SOCIETY TO THE MEETINGS OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ST. LOUIS, MAY 22-26, 1922.

The Massachusetts Medical Society was represented at these meetings by its full quota of five delegates. In the committee appointments of the House of Delegates this Society was represented by Dr. Lund in the Committee on Medical Education, and by Dr. Stetson in the Committee on Reports of Officers.

The addresses before the House of Delegates of President Work, of President-elect de Schweinitz, and of the Speaker of the House, Dr. Warnshuis, contained much of interest and of value relating to the American Medical Association, and its work, as well as to the profession at large, and collectively they bring before the Legislative Body of the American Medical Association many thoughts and beliefs looking toward the higher standards and greater broadness of the work of the medical profession as a whole, and these should be carefully read by all members of the Society.

The report of the Secretary states that the membership of the American Medical Association as of May 1, 1922, was 89,048, an increase for the year of 3,765. The Fellowship of the Association was 59,976, an increase of 2,052 in the past year.

The report of the Board of Trustees is a review of the business side of the Association, and shows the financial standing to be sound and progressive, and the capital invested to be constantly increasing. The demands upon the activities at the headquarters of the Association demand additional room, and plans have been perfected and partially carried out, providing for such increased space. A detailed financial statement accompanies the report of the Board of Trustees. One item of interest states that it is hoped and believed that the annual dues, which were increased from \$5.00 to \$6.00 in November, 1920, will be reduced to \$5.00 with the beginning of the new year.

As usual, the annual report of the Council on Health and Public Instruction, and of the Council on Medical Education and Hospitals were very complete and elucidating, and should be carefully read by those interested in present-day medical problems. The following quotation of the summary of the Council on Medical Education is worthy of repetition as illustrating some of the problems that must be met by this Council:

"The higher entrance requirements, improved medical schools, and the modern methods of teaching have created new problems in medical education. For example:

1. The necessity of limiting enrolments has made it difficult for well qualified students to secure enrolment in medical schools. It appears, however, that this difficulty is only temporary.

2. There is still ample room in Class A medical colleges for more than the total number of students enrolled in all colleges during the last session.

3. The cost of conducting medical schools under the present standards of medical education has been greatly increased. Instead of there being profits from students' fees, now the expense is two to four times the amount obtained from students' fees. The average income reported by sixty-nine medical schools is \$130,672, of which \$35,135 (26.9 per cent.) was obtained from students' fees.

4. The average expenditure of each medical school was \$123,947, including \$46,162 (37 per cent.) for all-time teachers, and \$21,131 (17 per cent.) for part-time teachers which makes 54 per cent. for instruction. The average annual fee paid by the student was \$185, and the average expense for his instruction was \$655. In 1916 the average fee was \$150, and the average expenditure was \$419.

5. Certain dangers from specialization have developed in that (a) medical schools are turning out specialists rather than thoroughly trained general practitioners, and (b) graduates are inclined to pose as specialists without first securing the essential experience or special training. The situation requires a reorganization of the undergraduate curriculum, and the requirement eventually, of evidence of special training before the physician is entitled to pose as a specialist.

6. Since the World War the lack of physicians in the smaller towns and rural communities has become more acute. It is evident that the solution of the problem is the establishing of hospitals in every center having sufficient population in the surrounding community to support a hospital.

7. A plan for the reorganization of the undergraduate curriculum calls for (a) the leaving of instruction in the specialties for the graduate school, (b) a less rigid division of the hours devoted to teaching in the various departments of the medical school, and (c) a closer correlation of clinical work with that of the so-called laboratory courses of instruction.

8. Among the acute problems of medical licensure are: (a) The licensing of graduates of low grade medical colleges by separate sectarian boards in Arkansas and Connecticut. (b) The licensing of

osteopaths as physicians in a few states, notably California, Colorado and Texas. (c) The granting of separate boards for certain groups of 'drugless' healers under a misconception of what is meant by the term 'the practice of medicine,' and (d) the importance of one standard of educational qualifications to be insisted upon alike for every one who is to be authorized to treat the sick."

As usual, a large number of resolutions were introduced in the House under the head of new business, some of which may be briefly considered. A resolution addressed to the Secretary of the Treasury and to Congress asking for a relief from the present unsatisfactory conditions attending the dispensing of alcohol for therapeutic uses by physicians, and recommending that provision be made for supplying bonded whiskey for medicinal use only at a fixed retail price to be established by the Government. A resolution addressed to those in authority having charge of the vocational training of disabled soldiers:

"To take such action in the interest of the welfare of all the people, and also for the protection of those who honestly desire to administer to the sick, to the end that the ex-soldiers seeking vocational training, which will fit them for ministering to the sick, and aiding in the recognition, control and prevention of disease, shall, at least, meet the requirements, and shall receive such adequate training as is defined in the classification of medical schools of the American Medical Association known as Class A, or acceptable medical schools—a standard which is approved by all right-thinking people moved by a desire for public welfare."

This resolution was passed, and is a modification of a resolution introduced at the request of the St. Louis Medical Society, stating that in the Ninth District, comprising the states of Missouri, Iowa, Kansas and Nebraska, there were enrolled in one Chiropractic School in Missouri more than 250 disabled ex-soldiers from all parts of the country, with the sanction and approval of the Government.

The definition of State Medicine this year, as last, called forth several attempts at its solution, no less than five such resolutions being introduced by different members of the House. The Reference Committee on Legislation and Public Relations finally recommended for adoption the following:

"The American Medical Association hereby declares its opposition to all forms of 'state medicine,' because of the ultimate harm that would come thereby to the public weal through such form of medical practice.

"'State medicine' is hereby defined for the purpose of this resolution, to be any form of medical treatment, provided, conducted, controlled or subsidized by the federal or any state government, or municipality, excepting such service as is provided by the Army, Navy or Public Health Service, and that which is necessary for the control of communicable diseases, the treatment of mental disease, the treatment of the indigent sick, and such other services as may be approved by and administered under the direction of or by a local county medical society, and are not disapproved by the state medical society of which it is a component part."

And this resolution was passed.

An amendment to the constitution was proposed which called forth much discussion, and was laid upon the table for one year, in accordance with the rules of the House. The amendment asked for reads as follows:

"Section 2.—Composition.—The House of Delegates is composed of delegates selected by the constituent associations, and of delegates from the Medical Departments of the Army and Navy, and the Public Health Service, appointed by the Surgeon-General of the respective departments, and of

section-delegates elected by the sections of the scientific assembly.

The section-delegates shall have the privilege of the floor, but only the right to vote on matters directly affecting the activities of the sections. The trustees shall be ex-officio members of the House of Delegates, but without the right to vote.

Section 3. The total unrestricted voting membership of the House of Delegates shall not exceed 150. The Medical Departments of the Army and the Navy, and the United States Public Health Service shall each be entitled to one delegate, and the remainder shall be apportioned among the constituent associations in proportion to their actual membership as hereinafter provided in the By-Laws. The scientific sections shall each be entitled to one section-delegate. Should the right of the section-delegate to vote be challenged on a question before the House, decision shall be made by a ruling of the Speaker, subject to the approval of the House.

This amendment, if adopted, would do away entirely with members of the House of Delegates representing the various sections with voting power, 15 in all. The principal argument offered for the passage of this amendment was the statement that certain sections were receiving double representation, of which the state of Illinois was one example. This state is entitled to nine delegates. In addition to the nine delegates from the Illinois State Medical Society, it was represented by five of its members as delegates from the various sections, making the Illinois delegation in the House of Delegates fourteen instead of its allotted nine. On the other hand, many of the most active and influential members of the House of Delegates are the representatives of the various sections—men of experience and of considerable length of service in the legislative branch of the Association, and their withdrawal would be a distinct loss to the personnel of the House. Naturally there was much discussion regarding this resolution, and the end is not yet, as its final settlement in San Francisco in 1923 will not unlikely be preceded by something of an oratorical struggle.

The Sheppard-Towner law came in for its share of discussion, and was finally disposed of through the following resolution:

"Whereas, The Sheppard-Towner law is a product of political expediency, and is not in the interest of the public welfare, and

Whereas, The Sheppard-Towner law is an imported socialistic scheme unsuited to our form of government, and

Whereas, The Sheppard-Towner law unjustly and inequitably taxes the people of some of the states for the benefit of the people of other states for purposes which are lawful charges only upon the people of the said other states, and

Whereas, The Sheppard-Towner law does not become operative in the various states until the states themselves have passed enabling legislation, therefore be it

Resolved: That the American Medical Association disapprove the Sheppard-Towner law as a type of undesirable legislation which should be discouraged."

The House approved the recommendation of the Board of Trustees relative to Public Health Activities of the American Red Cross, stating their belief that appropriate action should be taken to convince those in authority that the Public Health Activities of the American Red Cross are no longer necessary, and if continued are likely to promote community irresponsibility and helplessness in regard to its welfare. The House further voted that the Board of Trustees be instructed to take such action as will make this recommendation effective at the earliest possible moment. It is felt by the Trustees and by the House of Delegates as well, that much of the

work now being carried on by the American Red Cross can be taken care of by local and county medical organizations with much less dissatisfaction.

The question of Pay Clinics, Diagnostic Clinics, and Group Practice was brought to the attention of the House by the Board of Trustees, and the House voted that a survey be made of these clinics, such survey to be conducted jointly by the Judicial Council and the Council on Medical Education and Hospitals, with the request that their reports and recommendations be submitted to the next annual meeting of the House in San Francisco in 1923.

It was voted that the Trustees be authorized to establish a central bureau for the consideration of legislation, both national and state, in so far as such legislation pertains to medicine, or the practice of medicine, and the public health, such a central bureau to coordinate the activities of the several constituent state associations to ascertain and crystallize the opinions of the medical profession, and to represent the American Medical Association as a body.

The advisability of dividing the American Medical Association into districts was taken up on the suggestion of the President of the Association, Dr. Work, these several districts to be represented in the Board of Trustees by a Trustee, and in addition to the large, general meeting held yearly, that similar meetings be held in each district, preferably during the winter months. This matter was considered by the Reference Committee on Reports of Officers, who recommended that in view of the enormous scope and the great importance of this question, that the House direct the appointment by the President of a special committee to consider the matter, and report to the House of Delegates at the annual meeting in 1923.

The New England States have been very consistent for many years in reappointing their State Association delegates to the meetings of the American Medical Association. The wisdom of this custom is very noticeable in the work in the House of Delegates. The New England delegation has come to be looked upon as a group of capable, judicious, influential members, and as a delegation from one section of the country it is without question a group of men standing for the best things in medicine, and it is so considered in the House.

Respectfully submitted,

H. G. STETSON,

For the Delegates of the Massachusetts Medical Society.

Book Review.

Stedman's Medical Dictionary. Seventh Edition. By THOMAS LATHROP STEDMAN. 1144 pages, xv plates. Price \$7 net.

Stedman's Medical Dictionary has now reached its seventh edition. It is of convenient size for desk work and is a good example of the printer's art. There are several notable additions to be found in the appendix, such as plates showing the eggs of human parasites, changes in the morphology of the blood, the differential diagnosis of scarlet-fever as shown on the surface and on mucous membranes, protozoan parasites, and diagrams of anatomic structures. This book is of value to all interested in medical subjects and should be of assistance to writers of articles. It is published by William Wood & Co.

THE BOSTON Medical and Surgical Journal

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Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

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ENTER DR. ABRAMS.

A RECENT issue of the JOURNAL* contained an editorial on "The Electronic Reactions of Abrams," in which was set forth an outline of the method employed by Dr. Abrams in diagnosing disease from a few drops of blood. The editorial pointed out certain fundamental defects in the method, and showed the impossibility of the conduction by Abrams' apparatus of any sort of electromagnetic current or radio-activity known to man. Further study of the subject was handicapped by the lack of opportunity to witness the method in operation. The local Abrams representative refused to run a series of test cases under any conditions.

Then, most opportunely, Abrams himself came to Boston. On Sunday afternoon, October 8th, he delivered a lecture at the Copley-Plaza, at which between 800 and 1000 persons were present. On Monday afternoon, he appeared before the Board of Registration in Medicine at an informal hearing, prepared, as the Board was led to believe, to give a demonstration of his method. Opportunity had been given a representative of the practitioners of the Electronic method to inspect the room and to arrange for proper wiring, but when the meeting was called to order Dr. Abrams said it was impossible to give a demonstration then. Instead, he and

his followers started to hold an "experience meeting" in which they might testify to the efficiency of the method. Dr. Prior, chairman of the Board, acting with dignity and firmness, refused to listen to such a recital. The meeting was adjourned. The next day—Tuesday, October 10—pursuant to an invitation extended by him, Dr. Abrams gave a clinical demonstration of his method in the laboratory of one of his disciples. He first attempted to demonstrate simple phenomena based upon his theory of Electronic Reactions. It was a remarkable coincidence that the reactions were clearly visible or audible to those followers of his who were in the rear of the room, but were quite imperceptible to those members of the Massachusetts Medical Society who were there to look into the method and who occupied chairs close to the demonstration. Dr. Abrams consistently refused to submit his method to any test offered by those present, and confined himself to demonstrating the presence of lesions, the existence of most of which could be proved only by post-mortem examination. He selected for his experiment a member of the JOURNAL staff, a man in apparently perfect health. Yet this individual, according to Abrams, presented the following pathological conditions: Streptococcus infection of the left frontal sinus and of the right antrum; two ohms of tuberculosis, location, intestinal tract; congenital syphilis; sarcoma, non-metastatic, of the intestine. In demonstrating the situation of the sarcoma, Abrams located it first in the right lower quadrant and later, by another method, in the left lower quadrant.

Analysis of the results of Dr. Abrams' statements and demonstrations while in Boston shows two outstanding facts. First, he persistently refused to submit his method to a scientifically controlled test, or to a demonstration given under such conditions that the investigation of the method could be carried on under the usual rules of scientific criticism. Second, in the one case upon which he did demonstrate his method, he found the existence of four diseases—syphilis, tuberculosis, sarcoma, and streptococcus infection—in an individual entirely free from symptoms of any disease whatsoever. If, by his method, he could diagnose disease where no symptoms existed, he surely should have been able to approach without fear of failure a test based upon the diagnosis of blood specimens from a patient with well-marked clinical pathology. The fact that he refused to perform such a test is capable of only one interpretation—that is, that he knew full well his inability to make a really correct diagnosis.

The marvelous "cures" reported by himself and his followers must be explained on the ground of mental suggestion. Abrams gave this away when he said in his Sunday lecture that "if the patient will convince himself that he has no disease, I cannot elicit a reaction."

*August 17, 1922.

Abrams says that his Electronic Reactions are either the greatest miracle of the age or the greatest fake. No one who witnessed his demonstration and who listened at all critically to his vague explanation of the theory of these reactions could concede the former. Whether the thing is a conscious hoax or is a case of self-deception we cannot say. Whichever it is, it is dangerous doctrine; the time has come for the Board of Registration in Medicine to put a stop to the further perpetration of this fraud.

INSULIN IN THE TREATMENT OF DIABETES.

THE *New York Times* asserts that the use of Insulin in diabetes has been studied by officials of the Carnegie Corporation, and that an appropriation has been made for research work at the Potter Metabolic Laboratory and Clinic in California. It is claimed in this article that benefit has followed the use of this drug in practically all cases under observation. Dr. Pritchett will incorporate in the annual report of the corporation an account of the work carried on in California. Several remarkable cases are referred to in support of the claims.

This treatment was referred to in the Shattuck Lecture, delivered by Dr. Joslin in June, and is being used in Boston at the present time. To Dr. J. J. R. Macleod of Toronto belongs the honor of bringing this treatment to the attention of physicians.

The scientific spirit shown is in marked contrast with the claims often made by pseudo-scientists.

The *Times* also publishes reference to a gift of a large residuary legacy under the will of Mrs. Sarah L. Winchester to the General Hospital Society of Connecticut.

THE MEETING OF THE AMERICAN COLLEGE OF SURGEONS.

PRESENT indications tend to show that the meetings of this Association, October 23rd to 27th inclusive, will be one of the most important in its history.

Its membership includes over two thousand representative surgeons, and since Boston has always enjoyed the reputation of being a liberal host, a large attendance is expected.

The College took upon itself the task of standardizing surgical teaching and practice so far as it may be possible to accomplish these ends. It has dealt wisely and conservatively with the problems involved. To some it has appeared that too much conservatism has been in evidence in some ways, and an undue liberality in others. These opinions, however, might be applied to any movement designed to correct

abuses and place service for the people on higher planes. Taken all in all, a great deal has been accomplished, for, as a result of the work of the College, surgery occupies a position of greater dignity in the estimation of the public than ever before in history.

The presidential address is looked forward to with great interest, because it is expected that important policies will be outlined which will have distinct bearing in the future plans of the College.

The standards already set, and the results achieved should have a great influence on the public mind, for in the last analysis the people are the ones most concerned in medical progress. The College can work within the profession to make surgery the efficient servant of the people, but in the end the public must set legal standards for the practice of surgery for its own protection. The present legal standards only call for mediocrity. Surgery is a specialty in medicine calling for extraordinary experience and mental endowment. The results of surgery may be beneficent or tragical. The College may directly or indirectly lead to the adoption of legal requirements and restrictions relating to the practice of surgery. It is in a position to mold public opinion, and should accept the responsibility of leadership.

IMMUNITY CONFERRED BY THE SCHICK TEST.

In an article dealing with diphtheria, published in the Bulletin of the Chicago School of Sanitary Instruction under date of September 30, 1922, the following assertion appears: "If it (the test) shows that he can catch diphtheria, a life-long protection can be given him by these injections one week apart," etc. The statement is, however, modified in the next paragraph as follows: "Six months after giving the third injection of this medicine (referring to toxin-antitoxin) a second test is made just like the first test. This is to make sure the child is protected." These excerpts are taken from a letter distributed to parents in Chicago.

The question comes to mind whether we are in a position to speak so positively about any remedial agent. Over-confidence and too strong assertions are often unwise. There are too many exceptions to the rules in medicine.

NEWS ITEMS.

WEEK'S DEATH RATE IN BOSTON.—During the week ending October 7, 1922, the number of deaths reported was 208, against 170 last year, with a rate of 14.20. There were 30 deaths under one year of age, against 25 last year. The number of cases of principal reportable diseases were: Diphtheria, 51; Scarlet Fever, 33; Measles, 19; Whooping

It is recognized by our organizations throughout the country that the decline in returns from the Seal Sale during the past two years must be checked. It is believed that this can be accomplished by taking advantage of improving business conditions, and by beginning to organize earlier this year than has been done heretofore in most communities.

CLINICAL CONGRESS OF AMERICAN COLLEGE OF SURGEONS AT BOSTON.

PROGRAM FOR EVENING MEETINGS.

Presidential Meeting, Monday, October 23—Symphony Hall, 8 P. M.

Address of Welcome: Lincoln Davis, M.D., Boston, Chairman of Committee on Arrangements.

Address of the retiring president: John B. Denver, M.D., Philadelphia.

Introduction of foreign guests: Raffaele Bastianelli, M.D., F.R.C.S. (Hon.), Rome; Francis Seymour Kidd, M.Ch., F.R.C.S., London; Andrew Fullerton, C.B., C.M.G., Belfast; Einar Key, M.D., Stockholm.

Inaugural Address: Harvey Cushing, M.D., Boston.

The Doctor John B. Murphy Oration in Surgery—"Surgery of the Joints": Raffaele Bastianelli, M.D., F.R.C.S. (Hon.), Rome.

Tuesday, October 24—Jordan Hall, 8 P. M.

Einar Key, M.D., Stockholm: Treatment by Embolotomy of Circulatory Disturbances in the Extremities Due to Emboli.

Symposium: Genito-Urinary Surgery.

Hugh H. Young, M.D., Baltimore: Prostatectomy—Preparatory, Operative, and Postoperative Methods.

Francis Seymour Kidd, M.Ch., F.R.C.S., London: Simple Mesodermal Tumors of the Urinary Bladder: with the Report of a Case Treated by Operation.

Andrew Fullerton, C.B., C.M.G., Belfast: A Note on Unilateral Diuresis.

J. Bentley Squier, M.D., New York: The Surgery of Vesical Neoplasms.

Discussion: William C. Quinby, M.D., Boston; Alexander Randall, M.D., Philadelphia; John T. Geraghty, M.D., Baltimore; John H. Cunningham, M.D., Boston.

Wednesday, October 25—Jordan Hall, 8.30 P. M.

Special Meeting of the Boston Surgical Society.

Introductory Remarks: Robert W. Lovett, M.D., Boston, President.

Presentation of Henry J. Bigelow Medal to William Williams Keen, M.D., Philadelphia.

"Sixty Years Ago—1862 to 1922": William Williams Keen, M.D., Philadelphia.

Thursday, October 26—Jordan Hall, 8 P. M.

Symposium: Carcinoma of the Jaws, Tongue, and Cheeks and Lips.

George W. Crile, M.D., Cleveland: General Principles Involved in Operations: Summary of Results Obtained in the Crile Clinic, with Special Reference to Treatment of Carcinoma of the Jaws.

Edward S. Judd, M.D., Rochester, Minn.: Summary of Results Obtained in the Mayo Clinic, with Special Reference to Treatment of Cancer of the Tongue.

George E. Brewer, M.D., New York: Summary of Results Obtained in the Presbyterian Memorial, and

Roosevelt Hospitals of New York, with Special Reference to Treatment of Cancer of the Cheeks and Lips.

Discussion: Robert B. Greenough, M.D., Boston; Albert J. Oschner, M.D., Chicago; Vilray P. Blair, M.D., St. Louis; Joseph C. Bloodgood, M.D., Baltimore; Douglas Quick, M.D., New York; George P. Muller, M.D., Philadelphia; Harvey R. Gaylord, M.D., Buffalo; Alexander E. Garrow, M.D., Montreal; Channing C. Simmons, M.D., Boston.

Friday, October 27—Symphony Hall, 8 P. M.

Convocation of the American College of Surgeons.

Invocation: Reverend Doctor Alexander Mann, Boston.

Conferring of Honorary Fellowships.

Presentation of Candidates for Fellowship.

Presidential Address: Harvey Cushing, M.D., Boston.

Fellowship Address: Raffaele Bastianelli, M.D., F.R.C.S. (Hon.), Rome.

HOSPITAL CONFERENCE.

Monday, October 23, in Jordan Hall.

Morning Session, 9.00 to 12.30.

John B. Denver, M.D., F.A.C.S., President, Presiding.

Report on the Standardization Activities of the College in 1922: Franklin H. Martin, M.D., F.A.C.S., Director-General, American College of Surgeons.

The Doctor and the Hospital: Frederic A. Washburn, M.D., Superintendent, Massachusetts General Hospital, Boston.

The Minimum Standard and Its Application to Hospitals: Frederick W. Slobe, M.D., Hospital Standardization Department, American College of Surgeons.

What Real and Lasting Benefit Has Come to the Patient from Hospital Standardization?: Charles B. Monlinier, S.J., President, Catholic Hospital Association.

The American Hospital: A. R. Warner, M.D., Executive Secretary, American Hospital Association.

Hospital Standardization from a Public Health Standpoint: D. A. Craig, M.D., Provincial Commissioner, Nova Scotia Division, Canadian Red Cross, Halifax, Nova Scotia.

Hospital Standardization from the Viewpoint of the Medical Staff: R. A. Hughes, M.D., Moncton, New Brunswick.

Side-lights on Hospital Standardization: Robert Jolly, Superintendent, Baptist Hospital, Houston, Texas.

The Analysis of End Results: Eugene H. Pool, M.D., F.A.C.S., New York, and E. A. Codman, M.D., F.A.C.S., Boston.

General Summary of Hospital Standardization: Malcolm T. MacEachern, M.D., C.M., Director-General, Victorian Order of Nurses for Canada.

Afternoon Session, 2 to 4.30—General Round Table Discussion.

Conducted by Malcolm T. MacEachern, M.D., C.M.

The Round Table Discussion will be confined largely to the requirements of the Minimum Standard. Hospital superintendents, staff members, and members of boards of trustees are urged to send in questions which they desire to be answered, in order that the discussion may shed light on the various difficulties encountered. After representative speakers have opened the discussion of these questions, the subsequent discussion will be open to all. A tentative list of the topics to be considered follows:

I. Staff organization:

1. The selection of the exact type of staff organization best suited to local needs.
2. The division of responsibility into representative committees.
3. The initial organization of the staff conference.
4. The agenda and detailed description of the staff conference.
5. Methods of stimulating interest and enthusiasm in staff conferences.
6. Monthly analysis of hospital work.

II. Case Records:

1. The component parts of a case record.
2. Methods of securing the records.
3. Methods of stimulating increased interest in the records.
4. The hospital historian or record-clerk.
5. Filing systems, card indices, disease nomenclatures, and follow-up systems.

III. Laboratories and X-ray facilities:

1. Methods of stimulating increased use of laboratories by the medical staff.
2. Relationship of laboratory charges to laboratory service, and the various systems of laboratory charges commonly employed.
3. The extent to which routine laboratory examinations should be employed.
4. Laboratory facilities in the small hospital.
5. Laboratory reports and filing systems.
6. What should constitute the complete service in an X-ray department?
7. The interpretation of X-ray plates by roentgenologist versus interpretation by individual physicians.
8. To what extent can X-ray facilities outside of the hospital be used satisfactorily?

IV. Miscellaneous:

1. What points in particular should the hospital visitor investigate in making his annual visit?
2. Making the public understand the value of hospital standardization.
3. Methods of increasing the efficiency of the hospital survey of the College.

It should be clearly understood that all are urged to take part in the Round Table. Including the speakers of the morning program, the following names are a partial list of those who have been invited to lead in the discussion:

John G. Bowman, Chancellor, Pittsburgh University, Pittsburgh.
 Flinn O. Clark, President, Protestant Hospital Association.
 H. E. Webster, Superintendent, Royal Victoria Hospital, Montreal.
 W. C. Rappleye, Rockefeller Foundation.
 Horace G. Wetherill, M.D., F.A.C.S., Denver.
 Brigadier General C. E. Sawyer, M.C., U.S.A.
 Joseph B. Howland, M.D., Superintendent, Peter Bent Brigham Hospital, Boston.
 George W. Swift, M.D., F.A.C.S., Seattle.
 E. T. Dillon, M.D., F.A.C.S., Los Angeles.
 Roy C. Kingswood, M.D., London, Ontario.
 Rev. Newton E. Davis, Executive Secretary, Conference Board of Hospitals and Homes of Methodist Church.
 Matthew O. Foley, Managing Editor, Hospital Management, Chicago.
 S. S. Goldwater, M.D., Superintendent, Mt. Sinai Hospital, New York City.
 Joseph J. Weber, Editor Modern Hospital, Chicago.
 Frank E. Chapman, Superintendent, Mt. Sinai Hospital, Cleveland.

Henry M. Pollock, M.D., Superintendent, Massachusetts Homeopathic Hospital, Boston.

R. M. Harbin, M.D., F.A.C.S., Rome, Georgia.

Charles A. Gordon, M.D., F.A.C.S., Brooklyn.

John M. Baldy, M.D., F.A.C.S., Philadelphia.

A. K. Haywood, M.D., Superintendent, Montreal General Hospital, Montreal.

PRELIMINARY CLINICAL PROGRAM.

MASSACHUSETTS GENERAL HOSPITAL.

Tuesday, October 24.

C. A. Porter, G. W. W. Brewster, R. B. Greenough, Hugh Williams, and associates—9. General surgical operations.

Surgical Staff Clinic—2. C. A. Porter, J. H. Means, E. P. Richardson, and G. W. Holmes—Surgery of the thyroid gland. T. W. Harner—Tendon surgery. Chester Jones—Bile analysis. D. F. Jones—Pancreatitis. W. J. Mixer, J. B. Ayer, and John S. Hodgson—Neurological surgery. C. L. Scudder and H. F. Hewes—Chronic gastric ulcer. Beth Vincent—Plastic surgery. Wynan Whittemore—Surgery of the lung.

Wednesday, October 25.

Orthopedic operations and demonstrations—9. Smith-Petersen—Arthrodesis of sacro-iliac joint. M. H. Rogers—Arthrodesis of hip joint. Z. B. Adams—Reduction of congenital dislocation of the hip. R. B. Osgood—Excision of semilunar cartilage or excision of knee joint. P. D. Wilson—Syme amputation. L. T. Brown—Spinal fusion. R. N. Hatt—Stoefel operation for spastic paraplegia. Z. B. Adams—Keller's operation for hallux valgus.

Demonstration of Orthopedic Cases—2. P. D. Wilson—Results of Syme amputation, apparatus. R. B. Osgood—Multiple myeloma: report of cases with pathological specimens. E. G. Brackett—Orthopedic surgery in China. Smith-Petersen—Correction of deformities of the hip by arthrodesis, results. Mark H. Rogers—Results of treatment of intractable sciatica by arthrodesis of the sacro-iliac joint. Z. B. Adams—Possibility of reducing congenital dislocation of the hips in children over seven. L. T. Brown—Results of operative treatment of tuberculosis of the spine in adults. J. E. Goldthwait—Physical development in military training camps.

Thursday, October 26.

D. F. Jones, Lincoln Davis, E. P. Richardson, and associates—9. General surgical operations.

Staff Clinic: Symposium on Malignant Diseases—2. R. B. Greenough—Malignant disease, introductory remarks. D. F. Jones—Cancer of the rectum. R. B. Greenough—Cancer of the breast. D. C. Green—Cancer of the antrum. Lincoln Davis and G. A. Leland—Cancer of the uterus. Channing Simmons—Osteogenic sarcoma. G. W. Holmes—X-ray as a prophylactic and in palliative treatment. H. P. Mosher—Cancer of the esophagus. C. L. Scudder and H. F. Hewes—Cancer of the stomach.

Friday, October 27.

R. B. Greenough and D. F. Jones—9. General surgical operations. J. D. Barney and associates—11. Genito-urinary operations.

Surgical Clinic by Staff—2. J. D. Barney—Pneumocystography as an aid in diagnosis. G. G. Smith—Treatment of cancer of the penis. R. F. O'Neill. E. G. Crabtree—Surgical approach of the lower end of the ureter. H. H. Crabtree—Experiences with stone in the lower ureter. G. G. Jones—Methods of demonstrating tubercle bacilli in the urine. D. F. Jones and associates—3:45. Standardized treatment of frac-

BOSTON CITY HOSPITAL.

Tuesday, October 24.

F. B. Lund—9. General surgical operations. E. B. Young—9. Gynecological operations. J. C. Hubbard and associates—2. Dry clinic (general surgery). O. J. Herman—2. Intestinal gunshot wounds. E. B. Young and associates—2. Series and results in miscarriages. G. L. Vogel and associates—2. Ear and throat cases. L. M. Freedman—2. Carcinoma of soft palate and larynx. E. J. Monahan—2. Tonsillectomy in acute disease.

Wednesday, October 25.

J. C. Hubbard and associates—9. General surgical operations. G. L. Vogel and associates—9. Ear and throat operations. F. B. Lund—2. Demonstrations: carcinoma of stomach; carcinoma of tongue; facial nerve anastomosis; results of operation. I. J. Walker—2. Echinococcus cyst of liver; resection of stomach, three cases; oral cancer, radium, three cases. Stephen B. Mallett and W. H. Canavan—2. Cases of dental surgery.

Thursday, October 26.

H. A. Lothrop and associates—9. General surgical operations. Paul Thorndike and associates—9. Genito-urinary operations. F. J. Cotton and associates—2. Demonstrations: operation for recurrent dislocation of shoulder; series of cases of artificial ligaments in loose knees; arthroplasty, Putti technique; operation for flat-foot, new technique; pelvic fracture cases; Colles fracture results. P. F. Butler and A. W. George—2. Surgical X-rays.

Friday, October 27.

F. J. Cotton and associates—9. General surgical operations. H. A. Lothrop and associates—2. Demonstration of surgical cases. Horace Binney—2. Gangrene of the lung; abscess of the lung; separation of the lower epiphysis of the femur; certain type of fracture of the forearm. A. R. Keenup—2. Tumor of the carotid body. H. B. Stevens and associates—2. Ophthalmic surgery. J. J. Corbett—2. Series of cataract operations.

CHILDREN'S HOSPITAL.

Tuesday, October 24.

R. W. Lovett and associates—9. Orthopedic operations.

Surgical Staff Clinic—9. W. E. Ladd—(hardip cases with lantern slides). C. G. Mixer—Undescended testicle. J. S. Stone—Pneumococcus peritonitis; oncotic tumors. G. D. Cutler—Teratoma; webbed fingers. T. H. Lanman—Hemangiomas. J. S. Stone and associates—2. General surgical operations.

Orthopedic Staff Clinic—2. Robert Soutter—Obstetrical paralysis. A. T. Legg—Pathology and treatment. J. W. Sever. J. H. Fitzsimmons—Clubfoot. R. F. Ober—Treatment and operative means.

Wednesday, October 25.

R. W. Lovett and associates—9. Orthopedic Clinic: Fractures of the spine in industrial accidents; results of stabilizing operations for weak or flail joints in poliomyelitis. F. B. Blumenthal—9. Cases of orthodontia. J. S. Stone and associates—9. General surgical operations. R. W. Lovett and associates—2. Orthopedic operations.

Surgical Staff Clinic—2. Bronson Crothers—Injuries of spinal cord in childbirth. George D. Cutler—Meningocele. James S. Stone—Spina bifida occulta. William E. Ladd—Megacolon. Charles G. Mixer—Congenital defect of bile ducts.

Thursday, October 26.

R. W. Lovett and associates—9. Orthopedic operations.

Surgical Staff Clinic—9. T. H. Lanman—9. Skin grafts. W. E. Ladd—9. Cases of plastic surgery. G. D. Cutler—9. Ruptured kidney. C. G. Mixer—9. Tumors of the kidney; chronic pyelitis. James S. Stone and Oscar M. Schloss—9. Pyloric stenosis and spasm. D. Crosby Greene—9. Cases of laryngeal and esophageal stricture. J. S. Stone and associates—2. General surgical operations. R. W. Lovett and associates—2. Orthopedic clinic: Congenital dislocations of hip, results of operative treatment; Legg-Calvé disease, pathology and treatment; relief of contracture of the hip.

Friday, October 27.

J. S. Stone and associates—9. General surgical operations. R. W. Lovett and associates—9. Orthopedic clinic: Infantile paralysis, results in treatment clinic; muscle and tendon transplantation, the result of treatment; transplantations of the tensor fasciae femoris for paralysis of the abductors. R. W. Lovett and associates—2. Orthopedic operations.

Surgical Staff Clinic—2. W. E. Ladd—Intussusception. C. G. Mixer—Intestinal obstruction. G. D. Cutler—Intestinal obstruction by Meckel's diverticulum. J. S. Stone and O. M. Schloss—Atypical cases of appendicitis in children; differential diagnosis.

MASSACHUSETTS HOMEOPATHIC HOSPITAL.

Tuesday, October 24.

J. Emmons Briggs and W. S. K. Thomas—3. Surgery of the stomach, operations. D. W. Wells and associates—9. Operations on the eye. A. G. Howard—9. Orthopedics. Conrad Smith—9. Nose and throat clinic. D. W. Wells—9. Eye clinic. S. W. Ellsworth—9. Lesions of the gastro-intestinal tract. C. T. Howard and W. S. K. Thomas—2. General surgical operations. A. W. Rowe and W. L. Mendenhall—2. Vital function tests in relation to surgery.

Wednesday, October 25.

T. E. Chandler and H. J. Lee—9. Gynecological operations. Conrad Smith. E. R. Johnson, and C. W. Brush—9. Nose and throat operations. A. G. Howard—9. Demonstration: back strain. T. E. Chandler and H. J. Lee—2. Gynecological operations. A. S. Begg and F. H. Pratt—2. Anatomical and physiological demonstrations.

Thursday, October 26.

C. T. Howard and Clarence Crane—9. Surgery of the biliary tract. F. W. Colburn and H. L. Babcock—9. Operations on the ear. A. G. Howard—9. Orthopedics. Conrad Smith—9. Nose and throat clinic. S. W. Ellsworth—9. Demonstration: Some points in differential diagnosis of diseases of bones. J. Emmons Briggs and Clarence Crane—2. General surgery; operative clinic. W. H. Watters—2. Clinic-pathological conference and medico-legal autopsy. D. L. Belding—2. Wassermann tests in surgical diagnosis. S. B. Hooker—2. The necessity for adequate compatibility tests preliminary to blood transfusion. Helmut Ulrich—2. Blood tests in surgery.

Friday, October 27.

A. G. Howard—9. Orthopedic operations. D. W. Wells—9. Eye clinic. R. C. Wiggan—2. Genito-urinary surgery; operative clinic.

FREE HOSPITAL FOR WOMEN.

Tuesday, October 24.

W. P. Graves, F. A. Pemberton, and R. G. Wadsworth—9. Gynecological operations.

Wednesday, October 25.

W. P. Graves and F. A. Pemberton—9. Gynecological operations. W. P. Graves—2. Clinic on proctiditis; radium and cancer of the uterus.

Thursday, October 26.

W. P. Graves, F. A. Pemberton, and H. W. Baker—9. Gynecological operations. F. A. Pemberton—2. Clinic on diseases of the female urethra.

CARNEY HOSPITAL.

Tuesday, October 24.

F. W. Johnson and L. E. Phaneuf—9. Gynecological operations. L. E. Phaneuf—2. Gynecological clinic.

Wednesday, October 25.

J. T. Bottomley, D. F. Mahoney, and A. McK. Fraser—9. General surgical operations. C. M. Proctor—2. Oral surgery. W. E. Browne—2. End-results and demonstration of traumatic hands.

Thursday, October 26.

W. R. MacAusland and A. R. MacAusland—9. Orthopedic operations. W. R. MacAusland and A. R. MacAusland—2. Orthopedic demonstrations.

Friday, October 27.

J. T. Bottomley, D. F. Mahoney, and A. McK. Fraser—9. General surgical operations. D. J. Hurley and T. J. Shanahan—2. Eye, nose and throat operations.

PETER BENT BRIGHAM HOSPITAL.

Tuesday, October 24.

Harvey Cushing, W. C. Quinby, David Cheever, John Homans, and E. C. Cutler—9. General surgical operations. David Cheever, John Homans, E. C. Cutler, and F. C. Newton—2. Clinical demonstrations and talks (general surgical cases).

Wednesday, October 25.

Harvey Cushing, W. C. Quinby, David Cheever, John Homans, and E. C. Cutler—9. General surgical operations. Harvey Cushing, Gilbert Horrax, and Percival Bailey—2. Clinical demonstrations in neurological surgery.

Thursday, October 26.

Harvey Cushing, W. C. Quinby, David Cheever, John Homans, and E. C. Cutler—9. General surgical operations. W. C. Quinby, Roger Graves, and J. J. Joelson—2. Clinical demonstrations in genito-urinary surgery.

Friday, October 27.

Harvey Cushing, W. C. Quinby, David Cheever, John Homans, and E. C. Cutler—9. General surgical operations.

ST. ELIZABETH'S HOSPITAL.

Tuesday, October 24.

Arthur Chute—9. Genito-urinary operations. Arthur Crosbie—9. Genito-urinary operations.

Wednesday, October 25.

Joseph Stanton and Henry Rowen—9. General surgical operations. George Keenan and Francis Jantzen—9. General surgical operations.

Thursday, October 26.

Joseph Stanton and Henry Rowen—9. General surgical operations. George Keenan and Francis Jantzen—9. General surgical operations.

Friday, October 27.

Thomas Broderick—9. Orthopedic operations. Charles Kiekham—9. Gynecological operations and obstetrical ward visit.

BOSTON LYING-IN HOSPITAL.

Tuesday, October 24.

R. S. Eustis—2. Hemorrhagic disease of the newborn. Donald Munro—2. Intracranial hemorrhage in the newborn.

Wednesday, October 25.

F. S. Newell—2. Cesarean section under local anesthesia. F. C. Irving—2. Abdominal abortion with sterilization. B. E. Hamilton—2. Cardiac complications of pregnancy.

Thursday, October 26.

F. S. Newell—9. Cesarean section.

BOSTON DISPENSARY.

Tuesday, October 24.

John D. Adams and associates—9. Orthopedic operations: Hibbs operation, tuberculosis of spine; claw foot; rigid flat-foot.

Staff Clinic in Out-Patient Department—9. H. F. Day and associates—General surgical cases. Maynard Ladd and associates—Pediatrics. Malcolm Storer and associates—Gynecology. W. E. Cheney and H. J. Inglis—Nose and throat clinic. John D. Adams and associates—Orthopedic clinic. T. C. Hill and F. P. Williams—Diseases of the rectum. A. H. Crosbie and associates—Genito-urinary cases. H. F. Perry and associates—Diseases of the skin. J. D. Adams and associates—2. End-results, tuberculosis of spine, claw foot; non-operative treatment of acute hip infection. Occupational therapy (with lantern slides).

Wednesday, October 25.

H. F. Day and associates—9. Surgical operations: Inguinal hernia in the child; ingrowing toe nail; septic hand, an industrial injury. F. P. Williams, T. C. Hill, and associates—9. Fissure in ano; internal hemorrhoids.

Staff Clinic in Out-Patient Department—9. H. F. Day and associates—General surgery. Maynard Ladd and associates—Pediatrics. Malcolm Storer and associates—Gynecology. W. E. Cheney and H. J. Inglis—Nose and throat clinic. John D. Adams and associates—Orthopedics. T. C. Hill and F. P. Williams—Diseases of the rectum. A. H. Crosbie and associates—Genito-urinary clinic. H. F. Perry and associates—Diseases of the skin.

Staff Clinic and Short Talks—2. Benjamin Tenney—Some points in the anatomy and surgery of the knee joint. W. P. Cones—Bone Syphilis. R. H. Gilpatrick—Ankylosis of the jaw. W. F. Temple—Out-patient anesthesia. F. G. Barnum—Osteomyelitis. T. C. Hill

—Out-patient treatment of rectal diseases. Oliver G. Tinkham—Fracture of the elbow joint. Carl Bourse—Adaptation of amputation stumps to artificial limbs. J. J. Lynch, Jr.—Cervical adenitis. John J. Murphy—Abdominal diagnosis in the out-patient department. H. F. Day—Peritonitis following tonsillar infection.

Thursday, October 26.

W. E. Cheney and H. J. Inglis—9. Nose and throat operations. H. J. Inglis—9. X-ray diagnosis of diseases of nasal sinuses.

Staff Clinic in Out-Patient Department—9. H. F. Day and associates—General surgery. Maynard Ladd and associates—Pediatrics. Malcolm Storer and associates—Gynecology. W. E. Cheney and H. J. Inglis—Nose and throat clinic. T. C. Hill and F. P. Williams—Diseases of the rectum. A. H. Crosbie and associates—Genito-urinary clinic. H. F. Perry and associates—Diseases of the skin.

Clinic by Staff—2. W. E. Preble—Postoperative care of patients. Herman Osgood—X-ray treatment. A. K. Paine—Treatment of gonorrhea in women. L. H. Spooner—Health clinic. Maynard Ladd and Hilbert F. Day—Pyloric stenosis in infants; medical and surgical aspects.

Friday, October 27.

Staff Clinic in Out-Patient Department—9. H. F. Day and associates—General surgery. Maynard Ladd and associates—Pediatrics. Malcolm Storer and associates—Gynecology. W. E. Cheney and H. J. Inglis—Nose and throat. J. D. Adams and associates—Orthopedic clinic. T. C. Hill and F. P. Williams—Diseases of the rectum. A. H. Crosbie and associates—Genito-urinary clinic. H. F. Perry and associates—Diseases of the skin. H. F. Perry and associates—2. Acidosis and complications in treatment of syphilis; bone syphilis; epithelioma of the skin and its treatment by radium; carbon dioxide snow as a therapeutic agent.

LONG ISLAND HOSPITAL.

Wednesday, October 25.

John H. Cunningham and associates—9:30. Genito-urinary operations. John H. Cunningham and associates—2. Demonstration of genito-urinary cases.

Friday, October 27.

John H. Cunningham and associates—9:30. General surgical operations.

MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY.

Tuesday, October 24.

E. A. Crockett and associates—9. Ear operations. D. Crosby Greene, H. A. Barnes and associates—9. Nose and throat operations. G. S. Derby—9. Eye operations; ward visit; out-patient clinic. F. H. Verhooff—9. Lantern slide demonstration of pathological specimens.

Wednesday, October 25.

D. H. Walker and assistants—9. Ear operations. F. E. Garland and assistants—9. Nose and throat operations. W. B. Lancaster, G. H. Ryder, and G. S. Derby—9. Eye operations; clinical demonstrations; ward visit; out-patient clinic. A. F. MacMillan—2. Demonstration of X-rays of mastoids and accessory sinuses. H. P. Cahill—2. Demonstration of normal histological and pathological sections, especially of the internal ear. Staff—2. Demonstration of clinical cases.

Thursday, October 26.

W. F. Knowles and assistants—9. Ear operations. C. B. Faunce, Jr.—9. Nose and throat operations. F. H. Verhooff and S. J. McDonald—9. Eye operations; ward visit; out-patient clinic. H. P. Mosher, H. A. Barnes, and D. C. Greene—2. Demonstrations; End-results of tear sac operations; end-results of operation in cases of malignant disease of the accessory sinuses; a talk on the use of radium; End-results of cancer of the larynx. L. E. White—2. End-results of operations on the sphenoidal sinus. F. E. Garland and V. H. Kazanjian—2. End-results in cases of nasal deformity. H. P. Mosher, D. C. Greene, and D. C. Smith—2. Foreign bodies in the bronchus.

Friday, October 27.

Philip Hammond and assistants—9. Ear operations. H. P. Mosher and assistants—9. Throat operations. F. H. Verhooff and W. B. Lancaster—9. Eye operations; ward visits; out-patient clinic. E. A. Crockett—2. Demonstration of cases showing end-results of brain abscess and meningitis. Philip Hammond, H. P. Mosher, and D. C. Smith—2. End-results in cases of radical mastoid operations. G. L. Tober—2. End-results of operation for sinus thrombosis.

NEW ENGLAND DEACONESS HOSPITAL.

Tuesday, October 24.

D. F. Jones—9. General surgical operations. D. F. Jones—2. Carcinoma of the rectum. L. S. McKittick—2. Radium treatment of carcinoma of the rectum.

Wednesday, October 25.

F. H. Lahey—9. Thyroid and general surgical operations. Elliot P. Joslin—2. Treatment of diabetes and its surgical complications.

Thursday, October 26.

F. H. Lahey—9. Thyroid and general surgical operations. F. H. Lahey—2. Clinic on thyroid disease. B. E. Hamilton—2. Cardiac complications of thyroid disease and diagnosis of thyroid disease. H. M. Clute—2. Postoperative care and complications of thyroid disease. L. F. Sise—2. Anesthesia in thyroid disease. Sarah M. Jordan—2. Basal metabolism.

Friday, October 27.

F. H. Lahey—9. Thyroid and general surgical operations. F. H. Lahey—2. Clinic on thyroid disease. B. E. Hamilton—2. Cardiac complications of thyroid disease and diagnosis of thyroid disease. H. M. Clute—2. Postoperative care and complications of thyroid disease. L. F. Sise—2. Anesthesia in thyroid disease. Sarah M. Jordan—2. Basal metabolism.

NEW ENGLAND HOSPITAL FOR WOMEN AND CHILDREN.

Tuesday, October 24.

Isabel D. Kerr and Margaret L. Noyes—9. Nose and throat operations. Blanche L. Atwood, Olga Leary, and Mabel D. Ordway—9. Unusual case of glandular enlargement with marked hypertrophy of the breasts and mental symptoms.

Wednesday, October 25.

Elizabeth T. Gray and Florence Duckering—9. Gynecological operations. Marion Nute, Evelyn Lytle, and B. McW. Ryder—9. Obstetrical operations. Mabel D. Ordway—2. Neurosyphilis. Blanche Denig and Dr. Wright—2. Medical cases.

Thursday, October 26.

Letitia D. Adams—9. General surgical operations. Isabel D. Kerr—9. Nose and throat operations. Staff—2. Obstetrical, prenatal, and post-natal cases.

FORSYTH DENTAL INFIRMARY.

Tuesday, October 24.

Percy R. Howe—9. Short talks on recent dental research. Elmer W. Barron and Herman Robbins—9. Pediatrics as applied to dentistry.

Wednesday, October 25.

William E. Chenery, E. E. Tilton, W. G. Funnell, A. A. Barrow, B. F. Murray and Louis Arkin—9. Adenoid and tonsil operations. Louis Arkin—9. Adenoid and tonsil operations. M. J. Eisenberg—9. Dental Orthopedics.

Thursday, October 26.

W. A. Gobie—9. Extracting. Percy R. Howe and Ruth E. Hatch—9. Dental research laboratory demonstration. Mary G. Jackson—9. Dental prophylaxis.

Friday, October 27.

F. M. Erlenbach—9. Dental clinic. Leroy M. S. Minor—9. Oral surgery. E. W. Barron and H. S. Robbins—9. Nutrition, pediatric clinic.

BETH ISRAEL HOSPITAL.

Wednesday, October 25.

Albert Ehrenfried and Carl Bearse—9. General surgical operations. Albert Ehrenfried—2. Hereditary deforming chondrodysplasia and certain allied growth distortions (with lantern slides). S. A. Robbins—2. A consideration of the diagnostic points in the interpretation of abdominal X-rays.

Thursday, October 26.

E. G. Crabtree—9. Genito-urinary operations.

Friday, October 27.

Wyman Whittemore and Maurice Barron—9. General surgical operations.

CAMBRIDGE HOSPITAL.

Tuesday, October 24.

J. W. Sever—9. Orthopedic operations. A. H. Crosby—2. Genito-urinary operations.

Wednesday, October 25.

Albert August, E. A. Darling, A. W. Dudley, H. P. Stevens, and associates—9. General surgical operations. N. S. Bacon and E. J. Butler—2. Demonstration of nose and throat cases.

Thursday, October 26.

N. S. Bacon and E. J. Butler—9. Nose and throat operations. J. L. Huntington—2. Prenatal clinic. F. B. M. Cady—2. Neurological clinic.

Friday, October 27.

Albert August, E. A. Darling, A. W. Dudley, H. P. Stevens, and associates—9. General surgical operations.

COLLIS P. HUNTINGTON MEMORIAL HOSPITAL.

Wednesday, October 25.

Clinic by Staff—2. R. B. Greenough—The cancer problem. William Duane—Short wave length x-ray

therapy. Homer Wright—Free diagnosis service. William Bowie—New contributions of physics to biology. Channing Simmons—Radium in cancer of buccal mucosa and tongue. D. Crosby Greene—Radium in carcinoma of jaw and larynx. George Minot—Radium in Hodgkin's disease. G. G. Smith—Radium in cancer of the bladder. G. A. Leland—Radium in carcinoma of cervix. Ernest Daland—Radium in skin lesions, malignant and benign. Leland S. McKittrick—Radium in cancer of rectum.

Friday, October 27.

Clinic by Staff—2. R. B. Greenough—The cancer problem. William Duane—Short wave length x-ray therapy. Homer Wright—Free diagnosis service. William Bowie—New contributions of physics to biology. Channing Simmons—Radium in cancer of buccal mucosa and tongue. D. Crosby Greene—Radium in carcinoma of jaw and larynx. George Minot—Radium in Hodgkin's disease. G. G. Smith—Radium in cancer of the bladder. G. A. Leland—Radium in carcinoma of the cervix. Ernest Daland—Radium in skin lesions, malignant and benign. Leland S. McKittrick—Radium in cancer of rectum.

EVANGELINE BOOTH HOSPITAL.

Tuesday, October 24.

A. K. Paine—9. Prenatal clinic.

Thursday, October 26.

A. K. Paine and Stephen Rushmore—9. Gynecological operations.

Friday, October 27.

A. K. Paine and Stephen Rushmore—9. Gynecological operations.

UNITED STATES NAVAL HOSPITAL.

Tuesday, October 24.

Lieut. J. W. White—9. Orthopedic operations; Keller operation for hallux valgus; arthrotomy of knee for internal derangement; osteotomy for mal-united humerus; repair of finger tendon.

Wednesday, October 25.

Commander J. C. Woodward—9. General surgical operations.

Thursday, October 26.

Lieut. D. A. Heffernan—9. Eye, ear, nose, and throat operations. Various manifestations of syphilis from an ophthalmological standpoint; enucleations of tonsils; nasal septum corrections. Demonstration of nasal cases of acute nasal sinusitis requiring operation.

Lieut. J. W. White—2. Hallux valgus treated by the Keller operation, end-results and x-rays. Recurrent dislocation of the shoulder treated by the Chalmers-Ehrlich operation, end-results. Finger tendon repair, end-results. Malunion of femora treated by osteotomy, end-results. Generalized osteitis fibrosa treated by conservative means, end-results. Two cord injuries; one a persistent spastic hemiplegia, the other a complete recovery after a Brown-Séquard syndrome at the level of the sixth dorsal vertebra.

HARVARD MEDICAL SCHOOL.

Tuesday, October 24.

H. P. Mosher and C. B. Faunce, Jr.—2. Anatomical demonstrations. (Ear, Nose, and Throat Department.)

Friday, October 27.

Professors W. B. Cannon, L. J. Henderson, C. K. Drinker, and Drs. Alexander Forbes, J. C. Aub, and A. C. Redfield—2. Demonstrations and talks on various physiological subjects of importance in surgery. (Department of Physiology.)

Dates to be Arranged.

E. A. Codman—Registry of cases of bone sarcoma.

Correspondence.

THE PROPER USE OF THE HYPODERMIC SYRINGE.

PETER BENT BRIGHAM HOSPITAL.
Oct. 10, 1922.

Mr. Editor:

Appropos of the editorial on the "Lawful Possession of Hypodermic Syringes," in the *Boston Medical and Surgical Journal* for September 21, 1922, it is quite evident that the Massachusetts law, there cited, works an injury to all citizens of the Commonwealth. In the editorial a glandular product is cited as an example. Two such come at once to mind, pituitrin and adrenalin chloride. Pituitrin is the only known means of controlling diabetes insipidus, and in most cases must be given subcutaneously daily or twice daily. Adrenalin is more important. It often is the only means of controlling attacks of asthma. It is effective only if given subcutaneously. Asthma is a disease commonly met with. Often adrenalin must be used repeatedly. Frequently the asthmatic develops a severe paroxysm in the small hours of the night. Is it fair to him to so regulate matters by law that he must either have a nurse constantly on call or send for a physician, perhaps suffering prolonged discomfort because he must await while the physician dresses and travels to the patient? This is unnecessary expense to the poor, and needless discomfort to the rich, unless a nurse is taken out of general serviceableness to be on hand to give the hypodermic of adrenalin when needed. (This, too, is undesirable in the community.) This law should be modified to permit of a physician not only prescribing drugs which require hypodermic injection, but also prescribing the syringe with which the patient takes the prescribed medicine. We know that use of hypodermic syringes by patients under these and similar conditions is safe, sane and desirable.

Very truly yours,

HENRY R. CHRISTIAN.

NOTICES.

THE JOINT MEETING OF THE PLYMOUTH, BRISTOL, NORTH BRISTOL, SOUTH AND BARNSTABLE DISTRICTS.

By invitation of Dr. Sumner Coddige, this meeting will be held Nov. 9 at the Lakewood Sanatorium, Middleboro. Those who attended last year were graciously entertained, and those who could not be present missed an enjoyable and profitable meeting. The program will be published later.

BOSTON SURGICAL SOCIETY, INC.

A special meeting of the Society will be held at Jordan Hall, Huntington Avenue and Gainsborough Street, on Wednesday evening, October 25, 1922. Dr. William Williams Keen, Emeritus Professor of Surgery, Jefferson Medical College, Philadelphia, will give an address entitled "Sixty Years of Surgery: 1862-1922." On this occasion will be made the second award of the Henry Jacob Bigelow medal.

WALTER C. HOWE, Secretary.

ROBERT W. LOVETT, President.

A joint meeting of the Worcester District and the Worcester North District Medical Societies will be held at Burbank Hospital, Fitchburg, Tuesday, October 31, 1922, at 4.30 p.m. sharp. State officers will speak on subjects of importance. Dr. John Bryant of Boston will read the paper of the day. Subject: "Hospital Convalescents." Buffet lunch. L. F. Baker, President. C. H. Jennings, Secretary.

SOCIETY MEETINGS.

DISTRICT SOCIETIES.

A list of society meetings is herewith published. This list will be changed on information furnished by the secretaries of the societies, and will appear in each issue.

Barnstable District:—Hyannis—November 3, 1922, February 2, 1923, (Annual Meeting)—May 4, 1923.

Bristol South District:—Fall River,—November 2, 1922, May 3, 1923.

Essex North District:—Haverhill, (Semi-Annual Meeting)—Jan. 8, 1923. Y. M. C. A. Building, Lawrence, (Annual Meeting)—May 2, 1923.

Hamden Districts:—With Hampshire District in Holyoke. Regular meeting in October.

Suffolk District:—Combined meeting of Boston Medical Library and Suffolk District, November 22, 1922; December 27, 1922; January 31, 1923; February 28, 1923; March 25, 1923; Annual Meeting, April 25, 1923.

The Springfield Academy of Medicine meets the second Tuesday of each month. Schedule of speakers includes the following names: Dr. Alexis Carrel, Dr. W. B. Long, Dr. J. W. Williams, Dr. W. S. Thayer, and Dr. Barton Cooke, Hist. The date for each speaker has not been assigned.

Middlesex North District:—Meetings Wednesday, October 25, 1922; Wednesday, January 31, 1923.

Worcester District meetings in November, Nov. 8, Dec. 13, 1922, Jan. 10, Feb. 14, March 14, April 11 and May 9, 1923, the last named date being the annual meeting.

A joint meeting of the Worcester and Worcester North Districts will be held at the Burbank Hospital, Fitchburg, Oct. 31, 1922.

A joint meeting of the Plymouth, Bristol North, Bristol South and Barnstable Districts will be held at Lakewood Sanatorium, Middleboro, on November 9, 1922.

STATE, INTERSTATE AND NATIONAL SOCIETIES.

The American Association of Oral and Plastic Surgeons will hold their annual meeting at the Medical Library, Boston, on October 20th and 21st.

Clinical Congress of the American College of Surgeons will be held in Boston, Mass., on October 23-27, 1922, Franklin H. Martin, Chicago, Director-General.

Massachusetts Association of Boards of Health, October 25, 1922, Worcester, Mass., W. H. Allen, Mansfield, Mass., Secretary.

New York and New England Association Railway Surgeons, 22nd Annual Meeting at New York City, October 28, 1922, Donald Guthrie, Sayre, Pa., Secretary.

November, 1922. Massachusetts Society of Examining Physicians, (Date and place of meeting undecided), Hilbert F. Day, Secretary. National Cancer Week, November 12 to 18.

December, 1922. New England Dermatological Society Meeting, Wednesday, December 13, 1922, at 3.30 p.m., in the Surgical Amphitheatre, Boston City Hospital, C. Guy Lane, Secretary.

January, 1923. Massachusetts Society of Examining Physicians, (Date and place undecided), Hilbert F. Day, Secretary. Massachusetts Association of Boards of Health, January 25, Annual Meeting, Boston, W. H. Allen, Mansfield, Mass., Secretary.

February, 1923. New England Dermatological Society Meeting, February 14, 1923, at 3.30 p.m., in the Skin Out-Patient Department, Massachusetts General Hospital, C. Guy Lane, Secretary.

March, 1923. Massachusetts Society of Examining Physicians, (Date and place undecided), Hilbert F. Day, Secretary.

April, 1923. New England Dermatological Society Meeting, April 11, 1923, at 3.30 p.m., in the Surgical Amphitheatre, Boston City Hospital, C. Guy Lane, Secretary. Massachusetts Association of Boards of Health, April 26, 1923, Boston, W. H. Allen, Mansfield, Mass., Secretary.

May, 1923. Massachusetts Society of Examining Physicians, (Date and place undecided). American Pediatric Society Meeting, May 31, June 1 and 2, 1923, at French Lick Springs Hotel, French Lick, Ind., H. C. Carpenter, Secretary.

June, 1923. American Medical Association, San Francisco, June 26-29, 1922, Alexander R. Craig, Chicago, Ill., Secretary.

July, 1923. Massachusetts Association of Boards of Health, July 26, Nantasket, W. H. Allen, Mansfield, Mass., Secretary.

*Deceased Sept. 2, 1922.